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.. CATALOGUE OF METEORITES

CATALOGUE OF METEORITES

WITH SPECIAL REFERENCE TO THOSE
REPRESENTED IN THE COLLECTION OF THE
BRITISH MUSEUM (NATURAL HISTORY)

BY

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INTRODUCTION

A SHORT history of the development of the British Museum Collection of Meteorites, and an account of the characters and of the phenomena attending the fall of these bodies, are given in the separately-published "Introduction to the Study of Meteorites" prepared by the late Sir Lazarus Fletcher.

The present Catalogue, so far as it relates to specimens in the British Museum Collection, is intended to replace the list of meteorites which hitherto has been appended to that "Introduction."

In this Catalogue the data supplied for each meteorite include: the name by which it is most generally known; the locality; the date of fall or find; the chief synonyms; the classificatory descriptive name; details and original weight* of the fall or find; references to the literature; the present repository (besides the British Museum) of the main masses; † and a list of the specimens ‡ (with their weights in grams) representing the fall in the British Museum Collection. The references to the literature are given: for details of the fall or find; for good descriptions; and for reliable chemical analyses, the results of which are indicated by stating approximately, (1) the percentage (*f*) of nickeliferous iron; (2) the ratio (*n*) of the percentage of iron to that of nickel in the nickeliferous iron; and (3) the ratio (*m*) of the molecules of MgO to those of FeO in the magnesian silicates. No attempt is made to give a complete bibliography of each fall as in Wülfing's well-known work, † but the references cited have been chosen so as to supply the main and essential facts, so far as at present known, for each meteorite. References, therefore, are not generally given to old chemical analyses which are only of historic interest, nor to the earlier descriptions

* Generally in grams, but in pounds avoirdupois when the weight is so given in the original account in English of the fall.

† Drawn chiefly from data given in E. A. Wülfing's Catalogue, *Die Meteoriten in Sammlungen, Tübingen, 1897*; in the more recent (but for European Collections mostly pre-war) Catalogues of the Collections in the Museums of Calcutta, Chicago, Paris, Prague, Vienna, Washington, etc.; and in O. C. Farrington's Catalogue of Meteorites of North America (Mem. Nat. Acad. Sci. Washington, 1915, vol. 13).

‡ Arranged in order of decreasing weights. Mention is made of complete or nearly complete stones and slices of irons, but no detailed descriptions are given of pieces. Such descriptions occur in some catalogues, but appear to be of little utility, as they consist for the most part of a repetition of the characters already indicated by the classificatory descriptive name. ¶

(such as those of A. Brezina *) of the microscopic characters which served to determine the position of a meteorite in the Tschermak-Brezina classification and are now fairly well indicated by the name given to it in that system.

In the catalogue the name adopted to designate a meteoric fall has been chosen as the one most generally accepted and of long-standing,† and, in cases of doubt, as the one used in the catalogues of the most important collections in the country in which the meteorite fell. Thus for North American meteorites the names adopted are for the most part those used in the catalogues of G. P. Merrill and O. C. Farrington of the collections of the United States National Museum in Washington, and the Field Museum of Natural History in Chicago respectively.

The system of classification adopted in the Catalogue is that of Tschermak and Brezina as modified by the writer.‡

According to this system, the three main divisions, based on the relative amounts of nickeliferous iron and stony matter, are :—

- I. *Meteoric Irons* or *Siderites*, consisting mainly of nickeliferous iron.
- II. *Meteoric Stony-irons* or *Siderolites*, in which iron and stony matter are both in large amounts.
- III. *Meteoric Stones* or *Aerolites*, consisting mainly of stony matter, with nickeliferous iron and troilite, when present, scattered through it as small grains; this last division being subdivided into :—

(α) Chondritic Meteoric Stones or *Chondrites*, containing chondrules.

(β) Non-chondritic Meteoric Stones or *Achondrites*, in which chondrules are absent.

Division I (Irons) is divided according to structure, and generally in order of increasing percentages of nickel, into the following groups :—

- (a) *Nickel-poor Ataxites*, with nickel mostly less than 6 per cent.
- (b) *Hexahedrites*, in which nickel is about 7 per cent.
- (c) *Octahedrites*, which, according to the width of the kamacite bands and generally to increasing percentages of nickel (from about 7 to 14), are divided into :—

Coarsest, coarse, medium, fine, and finest octahedrites.

* Catalogues of the collection of meteorites in the Natural History Museum, Vienna (Jahrb. geol. Reichsanst. Wien, 1885, vol. 35 pp. 151–276; Ann. Naturhist. Hofmus. Wien, 1895, vol. 10, pp. 231–370).

† For this reason such names as Cronstad, Jhung, and Monroe are retained, although Kroonstad, Jhang, and Flovvs may be more correct from the point of view of spelling or locality, and cross-references are given to them. For the same reason, for Russian meteorites the original transliteration of the names has been generally kept, except that the German 'w' has been changed to 'v': in some cases a cross-reference is given to an alternative transliteration.

‡ G. T. Prior, *The Classification of Meteorites*, Mineral. Mag., 1920, vol. 19, pp. 51–63.

- (d) *Ataxites*, with medium percentages of nickel (about 7 to 14), probably mostly altered Octahedrites (Metabolites).
- (e) *Nickel-rich Ataxites*, with nickel generally greater than 14 per cent.

Division II (Stony-irons) is divided into :—

- (a) Olivine Stony-irons, or *Pallasites*.
- (b) Bronzite-asmanite Stony-irons, or *Siderophyres*.
- (c) Bronzite-olivine Stony-irons, or *Lodranites*.
- (d) Hypersthene-anorthite Stony-irons, or *Mesosiderites*.

Division III α (Chondrites) is divided, according to increasing percentages of nickel in the nickeliferous iron and corresponding increase of ferrous oxide in the magnesian silicates, into :—

- (a) *Enstatite-chondrites*.
- (b) *Bronzite-chondrites*.
- (c) *Hypersthene-chondrites*.

To the members of each of these groups are applied the qualifications according to colour (white, intermediate, grey, black); structure (crystalline, spherical, brecciated, veined); and composition (carbonaceous), etc., used in the Tschermak-Brezina classification.

Division III β (Achondrites) is divided, according to the content of lime, into :—

(a) Calcium-poor Achondrites which are subdivided into

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> (1) Enstatite-achondrites or <i>Aubrites</i>, corresponding to Enstatite-chondrites. (2) Clinobronzite-olivine-achondrites or <i>Ureilites</i>, corresponding to Bronzite-chondrites. (3) Hypersthene-olivine-achondrites
or <i>Amphoterites</i> (and <i>Rodites</i>) (4) Hypersthene-achondrites
or <i>Diogenites</i> (5) Olivine-achondrites
or <i>Chassignites</i> | } | corresponding to
Hypersthene-chondrites. |
|---|---|---|

(b) Calcium-rich Achondrites, which are subdivided into

- (1) Augite-achondrites or *Angrites*.
- (2) Diopside-olivine-achondrites or *Nakhlites*.
- (3) Clinohypersthene-anorthite-achondrites or *Eucrites*; including *Sherghottites* in which anorthite is replaced by maskelynite.
- (4) Hypersthene-clinohypersthene-anorthite-achondrites or *Howardites*.

The scheme of the above classification is embodied in the following table :—

TABULAR CLASSIFICATION OF METEORITES.

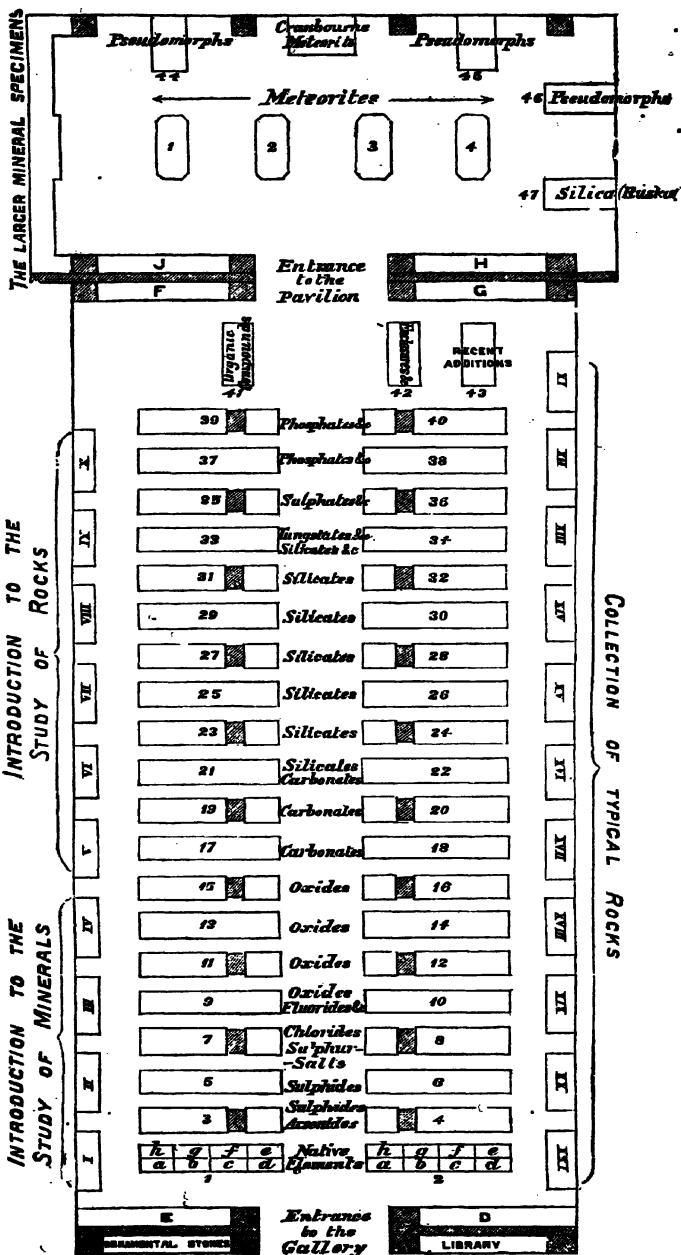
Group →		1	2	3	4
↑ CLASS.	Nickel-iron →	Fe : Ni = 13 and over. Enstatite (and Clin- enstatite).	Fe : Ni = 13 — 8. Bronzite (and Clin- bronze) and Oli- vine.	Fe : Ni = 8 — 2. Hypersthene (and Clinohypersthene) and Olivine.	Pyroxene (mostly monoclinic) and Olivine.
	Magnesian silicates →	MgO : FeO very high to ∞.	MgO : FeO over 4.	MgO : FeO = 4 — 2.	MgO : FeO less than 2.
	Felspar →	Oligoclase.	Oligoclase.	Oligoclase.	Anorthite.
	SIDERITES → Mainly nickel-iron.	Nickel-poor Ataxites. Hexahedrites. Coarsest Octahedrites. Coarse Octahedrites.	Medium Octahedrites to Finest Octa- hedrites.	Some Finest Octa- hedrites (?). Nickel-rich Ataxites.	Oktybheha County (?)
IRON- STONES.	SUPEROLITES* → Nickel-iron in large amount.		Most Pallasites. Siderophyre. Lodranite.	A few Pallasites.	
	CHONDRITES → Nickel-iron generally in decreasing am- ount from left to right.	Enstatite-chondrites. Daniel's Kuil (Hvittis) type.	Bronze-olivine- chondrites. Cronstad type.	Hypersthene-olivine- chondrites. Baroti and Soko-Banja types.	
STONES (AEROLITES).	ACHONDRITES → (Non-chondritic stones). Nickel-iron in small amount or absent.	Enstatite-achondrites. Aubrites. Bishopville, (Aubres, Bustee), and Bustee).	Clinobronzite-olivine- achondrites. Ureilites.	Hypersthene-olivine- achondrites. (Idites). Amphoterites (& Ro- Hypersthene-achondrites, Diogenites (Shalka, etc.). Olivine-achondrites. Chassignite.	Calcium-rich Achondrites. Angrite, Nakhilite. Eucrites, Shergottite, Howardites. Mesosiderites.

* As defined by N. S. Maskelyne, including both the lithosiderites and siderolites of Brezina.

In the Catalogue the attempt is made to include the names of all * meteorites known up to the end of the year 1922, and the falls which are not yet represented by specimens in the British Museum Collection are marked by an asterisk (*) in order to call attention to them as desiderata.

* A few names of doubtful meteorites of vague locality, or of which the history has been lost, such as Manzanares, Thunder Bay, etc., which are mentioned in Wülfing's book or in old catalogues, are omitted, since their perpetuation appears to serve no useful purpose.

PLAN OF THE MINERAL GALLERY



• CATALOGUE OF METEORITES

WITH SPECIAL REFERENCE TO THOSE REPRESENTED
IN THE BRITISH MUSEUM COLLECTION.

The names adopted for the meteorites are printed in thick type : those in italics are synonyms.

The specimens in the Collection are indicated by their Register Numbers (in square brackets) : their Weights are given in grams (1000 grams = 2.205 lb. avoirdupois).

Falls marked by an asterisk () were not represented in the British Museum Collection at the end of the year 1922.*

Abbreviations : f = percentage of nickeliferous iron ; n = ratio of percentage of iron to that of nickel in the nickeliferous iron ; m = ratio of the molecules of MgO to those of FeO in the magnesian silicates.

Abdel Malek, v. Nakhla.

Abel, v. Cranbourne.

Aberdeen, v. Bath.

Abert Iron, v. Toluca.

***Abo**, Finland.

Known before 1840.

Stone. Chondrite (montréjite of Meunier).

One gram in Paris (Mus. d'Hist. Nat.) (Cat. Coll. Météorites Mus. d'Hist. Nat. Paris, 1898, p. 70, and 1909, p. 31 (No. 125)).

***Accalana**, Australia.

Main mass in Adelaide, South Australia. A cast in the British Museum Collection. No description yet published.

***Adalla**, Konia, Asia Minor.

Known 1883.

Synonym : Konia.

Stone. Eucrite.

Mentioned by S. Meunier (Météorites, Paris, 1884, pp. 295, 298). 3 grams in Paris (Mus. d'Hist. Nat.) (Cat. Coll. Météorites Mus. d'Hist. Nat. Paris, 1909, p. 41).

• **Adams County**, v. Mount Joy.

Adare, v. Limerick.

Adargas, Jimenez, Chihuahua, Mexico. •

Known for centuries.

Synonyms: Concepcion; Hacienda Concepcion; Huejuquilla; Jimenez; Rio Florido (?); San Bartolomé; Sierra de las Adargas; Valle de Allende; Valle de San Bartolomé. •

Iron. Medium octahedrite.

A mass of over 3,000 kg. (3 tons) was known for a long time at Concepcion, but is said to have been transported there from Sierra de las Adargas in 1780 (L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 140, full bibliography). The Rio Florido mass (A. Castillo, Cat. Météorites Mexique, Paris, 1889, p. 6) is probably identical with Adargas (L. Fletcher, l.c., pp. 144-8).

Main mass (3,325 kg.) in Mexico City (School of Mines).

Specimen: [80111], 47 grams.

Admire, Lyon County, Kansas, U.S.A.

Found 1881.

Stony-iron. Brecciated pallasite.

A mass of 12 to 15 lb. was ploughed up in 1881, and other masses later, making a total weight of about 66 lb. (30 kg.): described by G. P. Merrill and analysed by W. Tassin (Proc. U.S. Nat. Mus. Washington, 1902, vol. 24, p. 907), $n = 15$, m of olivine = 7.

Over 18 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [85741], a slice, 1076 grams.

Aeriotopos, v. Bear Creek.

Agen, Lot-et-Garonne, France.

Fell 1814, Sept. 5, noon.

Synonym: Galapian (partly).

Stone. Veined intermediate chondrite.

A shower of stones, of total weight of about 30 kg., the largest weighing about 9 kg., fell, after appearance of cloud and detonations (J. F. Boudon de Saint-Amans, Ann. Chim., Paris, 1814, vol. 92, p. 25; and L. W. Gilbert, Ann. Phys. (Gilbert), 1814, vol. 48, pp. 340, 395, 402).

Main mass in Paris (Mus. d'Hist. Nat.).

Specimen: [19971], 40 grams.

Agen, v. Barbotan; Galapian.

Agra, v. Kadonah; Kheragur; Nagaria.

Agram, v. Hraschina.

Agua Blanca, v. Descubridora.

Ahnighito, v. Cape York.

Ahumada, Chihuahua, Mexico.

Found 1909.

Stony-iron. Pallasite.

A mass weighing 116 lb. was found 60 miles east of Ahumada: described by O. C. Farrington (Field Mus. Nat. Hist. Chicago, 1914, Publ. 178, Geol. Ser., vol. 5, no. 1, p. 1).

Main mass in Chicago (Field Mus. Nat. Hist.).

Specimens: [1913,177], a slice, 606 grams; [1912,112], 47 grams.

Aigle, v. L'Aigle.

Aimi, v. Gifu.

Ain, v. Luponnas; Simonod.

Ainsa Iron, v. Tucson.

Ainsworth, Brown County, Nebraska, U.S.A.

Found 1907.

• Iron. Coarsest octahedrite.

A mass of $23\frac{1}{2}$ lb. was found: described by E. E. Howell and analysed by W. Tassin (Amer. Journ. Sci., 1908, vol. 25, p. 105), Ni = 6.49% ($n = 14$).

1.7 kg. in Washington (U.S. Nat. Mus.).

Specimen: [1908,184], a slice, 536 grams.

Akbarpur, Saharanpur district, United Provinces, India.

Fell 1838, April 18, 8 a.m.

Synonym: Saharanpur.

Stone. Brecciated grey chondrite.

A stone weighing about 4 lb. fell, after detonations (copy of letter of April 28, 1838, of the Peshkar of Munglour, in Min. Dept., British Museum).

Specimen: [15646], the nearly complete stone, 1569 grams.

Akershuus, v. Ski.

Alabama, v. Lime Creek; Walker County.

Alais, Gard, France.

Fell 1806, March 15, 5 p.m.

Stone. Carbonaceous chondrite.

Two stones, of about 4 and 2 kg. respectively, fell after detonations, one at Saint Etienne de Lohm and the other at Valence (— Pagès and L. A. d'Hombres-Firmas, Journ. Physique, Paris 1806, vol. 62, p. 440). Analysed by J. J. Berzelius (Ann. Phys. (Poggendorff), 1834, vol. 33, p. 113; see also H. E. Roscoe, Phil. Mag., 1863, vol. 25, p. 319).

154 grams in Paris (Mus. d'Hist. Nat.).

Specimens: [61329], $10\frac{1}{2}$ grams; [33964], $2\frac{1}{2}$ grams.

Alastoeva, v. Djati-Pengilon.

Alatyr, v. Novo-Urei.

Albacher Mühle, v. Bitburg.

Albany County, v. Bethlehem.

Albareto, Modena, Italy.

Fell 1766, middle of July, 5 p.m.

Synonym: Modena.

Stone. Spherical hypersthene-chondrite.

A large stone of about 12 kg. fell, after detonations (D. Troili, Della caduta di un sasso dall'aria, Modena, 1766; and E. F. F. Chladni, Feuer-meteore, Wien, 1819, p. 250). Analysed by P. Maissen (Gazzetta Chimica Italiana, 1880, vol. 10, p. 20).

697 grams in Modena University, 145 grams in Rome University.

Specimens: [55387], 50 grams; [35728], 2 grams.

Albuquerque, v. Glorieta Mountain. •

Aldsworth, Cirencester, Gloucestershire, England.

Fell 1835, Aug. 4, 4.30 p.m.

Synonym: Cirencester.

Stone. Veined grey chondrite.

One stone of $1\frac{1}{2}$ lb. and a shower of smaller stones fell $\frac{1}{2}$ mile from Aldsworth, after detonations (and appearance of fire-ball at Cirencester) (T. C. Brown, Rep. British Assoc., 1857, p. 140).

Specimen : [61308], the main mass of the stone, 520 grams.

Aleppo, Syria.

Fell about 1873 (?).

Synonyms : Haleb; Tirnova.

Stone. Brecciated white chondrite.

According to Dr. Halid Edhem Bey's labels sent by Dr. L. Eger with the British Museum specimen, the meteorite is called Haleb (not Tirnova, as given earlier by mistake), and Haleb is identical with Aleppo. A specimen had been offered to the Paris Museum by Dr. Halid Edhem Bey, by mistake, as from Tirnova, Roumelia (S. Meunier, Comptes Rendus Acad. Sci. Paris, 1893, vol. 117, p. 257). The stone weighed about 7 lb.

581 grams in Vienna (Naturhist. Mus.), 298 grams in Prague (Bohemian Museum).

Specimen : [70349], 77 grams.

Alessandria, Piedmont, Italy.

Fell 1860, Feb. 2, 11.45 a.m.

Synonyms : Alexandria; Piedmont; Santa Giulietta.

Stone. Veined grey chondrite.

Several stones (about seven), weighing from 300 grams to 1 kg. each, fell, after detonations, at San Giuliano Vecchio (G. Missaghi, Il Nuovo Cimento, Pisa, 1861, vol. 13, p. 272).

256 grams in Turin University.

Specimens : [1920,280], 137 grams; [33296], 26 grams; [35332], 9 grams.

***Alexander County, North Carolina, U.S.A.**

Found before 1875.

Synonym : Cedar Creek.

Iron. Coarse octahedrite.

Described by S. C. H. Bailey and analysed by F. P. Venable (Journ. Elisha Mitchell Sci. Soc. Raleigh, North Carolina, 1891, vol. 8, p. 17), Ni = 5.86% ($n = 16$).

193 grams were in Bailey's Collection in 1891.

Alexandria, v. Alessandria.

Alexejevka, v. Bachmut.

Alexinatz, v. Soko-Banja.

Alfanello, Brescia, Italy.

Fell 1883, Feb. 16, 3 p.m.

Synonyms : Brescia; Cremona.

Stone. Intermediate hypersthene-chondrite.

A stone of about 228 kg. fell, after detonations (L. Bombicci, Atti R. Accad. Lincei Roma, Sci. Fis. Mat. Nat. Cl., 1882-3, vol. 14, p. 675). Described and analysed by H. von Foullon (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1883, vol. 88, Abt. 1, p. 433); analysed also by P. Maissen (Gazzetta Chimica Italiana, 1884, vol. 13, p. 369), and by others with very varying results.

12 $\frac{1}{2}$ kg. in Berlin University, 7 $\frac{1}{2}$ kg. in Rome University, 5 kg. in Budapest (Hung. Nat. Mus.).

Specimen : [55240], three pieces, 2515, 194, and 22 grams.

Algoma, Kewaunee County, Wisconsin, U.S.A.

Found 1887.

Iron. Medium octahedrite.

A mass of 9 lb., of discoid shape, was ploughed up: described by W. H. Hobbs with analysis by A. A. Koch (Bull. Geol. Soc. America,

1903, vol. 14, p. 97), Ni = 10.62% ($n = 9$).

Main mass in Wisconsin University.

Specimen: [86139], four fragments, 17 grams.

*Allahabad, v. Chail; Futtehpur.***Allegan, Allegan County, Michigan, U.S.A.**

Fell 1899, July 10, 8 a.m.

Stone. Spherical bronzite-chondrite.

A stone of about 70 lb. fell, after detonations, on Thomas Hill on the Saugatuck Road (H. A. Ward, Amer. Journ. Sci., 1899, vol. 8, p. 412). Described by G. P. Merrill and analysed by H. N. Stokes (Proc. Washington Acad. Sci., 1900, vol. 2, p. 41), $f = 23$, $n = 12$, $m = 5$.

Main mass in Washington (U.S. Nat. Mus.).

Specimens: [84553], 763 grams; [1920,281], fragments, 229 grams.

*Alleghany Mountains, v. Greenbrier County.**Allegheny County, v. Pittsburgh.**Allen County, v. Scottsville.**Alpine, v. Chico Mountains.****Altai, Tomsk, Siberia.**

Fell 1904, May 22, 11.30 p.m.

Stone.

After appearance of brilliant meteor and detonations, many small stones fell near Barnaul, but only about six were recovered, the largest weighing about 9 grams, and the total weight being 25 grams (V. N. Mamontov, Trav. Mus. Géol. Pierre le Grand, St.-Petersbourg, 1909, vol. 3, p. 107, plate).

***Alt Bela, Ostrau, Moravia, Czechoslovakia.**

Found 1898.

Synonyms: Alt Biela; Stara Bela.

Iron. Fine octahedrite.

A mass of about 4 kg. was said to have fallen at beginning of nineteenth century: described by F. Smyčka and analysed by M. Noff and A. Stocký (Jahresber. Real-gymn. Mährisch-Ostrau, 1899; Abst. in Zeits. Kryst. Min., 1901, vol. 34, p. 707; also Verhand. Naturf. Ver. Brünn, 1900, vol. 38, p. 29, pl.), Ni = 12.89% ($n = 7$).

2.7 kg. in Prague (Bohemian Museum).

*Alt Biela, v. Alt Bela.**Amakaken, v. Caperr.**Amalia Farm, v. Bethany.**Amana, v. Homestead.****Amates (Rancho de los Amates), Iguala, Morelos, Mexico.**

Known before 1889.

*Synonym: Morelos.

Iron. Fine octahedrite.

Only 3 grams known, in Chicago (Field Mus. Nat. Hist.) (O. C. Farrington, *Cat. Meteorites North America*, Mem. Nat. Acad. Sci. Washington, 1915, vol. 13, p. 31). Described by A. Castillo (*Cat. Météorites Mexique*, Paris, 1889, p. 3).

Ambapur Nagla, Aligarh district, United Provinces, India.

Fell 1895, May 27, 1 a.m.

Stone. Crystalline spherical chondrite.

After the appearance of a luminous meteor moving from E. to W., a stone of about 14 lb., broken into two pieces, was found (letter of T. H. Holland of April 15, 1896, with abstract of report of the fall by C. E. Crawford, in Min. Dept., British Museum).

About 4 kg. in Calcutta (Mus. Geol. Surv. India).

Specimens : [81117], 930 grams; [81118], 145 grams.

***Ameca-Ameca**, Mexico State, Mexico.

Known before 1889.

Iron.

Small nodule in the Mexican National Museum, Mexico City: described by A. Castillo (*Cat. Météorites Mexique*, Paris, 1889, p. 3). Perhaps identical with Toluca (L. Fletcher, *Mineral. Mag.*, 1890, vol. 9, pp. 168-9).

***Anderson**, Hamilton County, Ohio, U.S.A.

Prehistoric.

Synonyms : Hamilton County; Little Miami; Turner Mound.

Stony-iron. Pallasite.

A mass of 847 grams was found on the altar of Mound No. 3 of the Turner group of earthworks in the Little Miami Valley (W. L. P. Kinnicut, *Ann. Rep. Peabody Mus. Arch. Cambridge (Mass.)*, 1884, vol. 3, p. 381). Perhaps identical with Brenham.

216 grams in Harvard University.

***Andhara**, Muzaffarpur district, Bengal, India.

Fell 1880, Dec. 2, 4 p.m.

Stone.

A stone weighing about 6 lb. was seen to fall and was made an object of worship in a temple built over the place of fall (L. L. Fermor, *Rec. Geol. Surv. India*, 1907, vol. 35, pt. 2, p. 92).

Andover, Oxford County, Maine, U.S.A.

Fell 1898, Aug. 5, 7.30 a.m.

Stone. Spherical chondrite.

A stone of about 7 lb. fell, after detonations (H. A. Ward, *Proc. Rochester Acad. Sci.*, 1902, vol. 4, p. 79).

Main mass was in 1915 in Brookline, Mass. (in the possession of H. V. Poor).

Specimen : [86762], 20 grams.

***Angara**, Yeniseisk, Siberia.

Synonyms : Muroshna; Uderei; Vorova.

Iron.

Found in gold-washings. Small specimens from the Great Muroshna, tributary of the Angara, and Uderei rivers, found in 1885, and from Vorova, tributary of the Great Muroshna, were in Petrograd (Mus. Acad. Sci.) in 1897 (E. A. Wülfing, *Die Meteoriten in Sammlungen*, Tübingen, 1897, p. 396). Doubtfully meteoric.

Angara, v. Ssyromolotovo.

Angela, v. La Primitiva.

Angers, Maine-et-Loire, France.

Fell 1822, June 3, 8.15 p.m.

Stone. Veined white chondrite.

- After appearance of luminous meteor, and detonations, a stone of about 1 kg. was seen to fall (Ann. Phys. (Gilbert), 1822, vol. 71, p. 345).
80 grams in Paris (Mus. d'Hist. Nat.).

Specimens: [63924], 14 grams; [48761], 8 grams.

Angra dos Reis, Rio de Janeiro, Brazil.

Fell 1869, Jan. 30, 5 a.m.

Stone. Angrite.

A stone of about 1½ kg. fell: described by G. Tschermak and analysed by E. Ludwig (Tschermaks Min. Petr. Mitt., 1887, vol. 8, p. 341, and 1888, vol. 9, p. 423), $m = 2\frac{1}{2}$.

344 grams in Rio de Janeiro.

Specimen: [63233], 6 grams.

Anjela for *Angela*, v. La Primitiva.

***Annaheim**, Saskatchewan, Canada.

Found 1916.

Iron. Coarse octahedrite.

A crescent-shaped mass of 11.84 kg. was found in 1916 six miles north of Annaheim, but it may possibly have fallen in 1914, Jan. 21, 2.30 p.m., as a fire-ball was seen and detonations heard on that date: described by R. A. A. Johnston and analysed by H. V. Ellsworth (Trans. Roy. Soc. Canada, 1921, vol. 15, sect. 4, p. 69, 14 plates), $Ni = 7.84\%$ ($n = 11\frac{1}{2}$).

Main mass in Ottawa (Mus. Geol. Surv. Canada).

Annapolis, v. Nanjemoy.

***Antarctic**, Adelie Land, Antarctic Regions.

Found 1912.

Stone.

A stone was found on snow in Lat. 67° 17' S., Long. 142° 23' E. during the Australasian Antarctic Expedition of 1911-14 (D. Mawson, The Home of the Blizzard, 1915, vol. 2, p. 11).

Antifona, v. Collescipoli.

Antofagasta, v. Mantos Blancos; San Cristobal.

Apoala, Oaxaca, Mexico.

Found 1889.

Iron. Fine octahedrite.

A mass of about 85 kg. was found: described by E. Cohen (Meteoritenkunde, 1905, Heft 3, p. 384).

Main mass in City of Mexico (Mus. Inst. Geol.).

Specimen: [86068], 283 grams.

Apollonia, v. Santa Apollonia.

Appley Bridge, Wigan, Lancashire, England.

Fell 1914, Oct. 13, 8.45 p.m.

Synonyms: Lancashire; Wigan.

Stone. •Grey•hypersthene-chondrite.

After appearance of luminous meteor and detonations, a stone of about 33 lb. was found next day at Halliwell farm (W. F. Denning, *Nature*, London, 1914, vol. 94, p. 258, and W. C. Jenkins, *ibid.*, p. 505). Described and analysed by W. C. Jenkins and E. L. Rhead (*Monthly Notes*, Royal Astron. Soc., 1914, vol. 75, p. 92).

Specimens: [1920,40], the nearly complete stone, about 24 lb. (10,900 grams); [1920,41], 422 grams; [1919,98], fragments, 3 grams.

Apt, Vaucluse, France.

Fell 1803, Oct. 8, 10.30 a.m.

Synonyms: Saurette; Vaucluse.

Stone. Veined grey chondrite.

A stone of about 3½ kg. fell, after detonations (A. Laugier, *Ann. Phys.* (Gilbert), 1804, vol. 16, p. 72).

1 kg. in Paris (Mus. d'Hist. Nat.), 297 grams in Vienna (*Naturhist. Mus.*).

Specimen: [35167], 37 grams.

***Aragon**, Polk County, Georgia, U.S.A.

Found 1898.

Iron. Nickel-poor ataxite.

A specimen of 5 grams in Chicago (Field Mus. Nat. Hist.) (O. C. Farrington, *Cat. Coll. Meteorites*, Field Mus. Nat. Hist., Chicago, 1916, p. 237).

Arispe, Sonora, Mexico.

Found 1896.

Synonym: Moctezuma (of F. Berwerth).

Iron. Coarsest octahedrite.

A mass of about 272 lb. was found in 1898 about 15 miles N.W. of Arispe, and two other masses of 116 lb. and 20 lb. had been found in 1896 about 25 miles N.W. of Arispe: the largest mass was described by H. A. Ward (*Proc. Rochester Acad. Sci.*, 1902, vol. 4, p. 79) and by A. F. Wunsch (*Proc. Colorado Sci. Soc.*, 1903, vol. 7, p. 67); the smaller masses by O. C. Farrington (*Field Mus. Nat. Hist. Chicago*, 1914, Publ. 178, *Geol. Ser.*, vol. 5, no. 1, p. 2). Analysed by J. E. Whitfield (H. A. Ward, *l.c.*, p. 79), Ni = 7.04% ($n = 13$).

62 kg. in Washington (U.S. Nat. Mus.).

Specimen: [86425], a slice, 1910 grams.

Arizona, v. Cañon Diablo; Tucson.

Arlington, Sibley County, Minnesota, U.S.A.

Found 1894.

Synonym: Sibley County.

Iron. Medium octahedrite.

A mass of about 19½ lb. was found 2½ miles N.E. of Arlington: described by N. H. Winchell and analysed by F. F. Sharpless (*Amer. Geologist*, 1896, vol. 18, p. 267, pl. 10), Ni = 8.60% ($n = 10½$).

Main mass in Minnesota University.

Specimens: [1921,438], an end-slice, 101 grams; [83393], 56 grams.

Arltunga, v. Cranbourne.

Arva, v. Magura.

Asco, Corsica.

Fell 1805, November.

Stone. Veined white chondrite.

Original weight not known (P. Partsch, *Die Meteoriten*, Wien, 1843, p. 64).

42 grams known, 18 in Vienna (Naturhist. Mus.).

Specimen : [35169], a fragment, less than a gram.

Asheville, Buncombe County, North Carolina, U.S.A.

Found 1839.

Synonyms : Baird's Farm ; Baird's Plantation ; Buncombe County. Iron. Medium octahedrite.

A mass about the size of a man's head was found 6 miles north of Baird's Farm (C. U. Shepard, *Amer. Journ. Sci.*, 1839, vol. 36, p. 81 ; and 1847, vol. 4, p. 79).

271 grams in Vienna (Naturhist. Mus.).

Specimens : [33749], 70 grams ; [34610], 28 grams ; [24003], 13 grams ; [34375], 5 grams.

Asheville, v. Black Mountain ; Duel Hill (1854).

Assam, India.

Known 1846.

Stone. Brecciated grey chondrite.

Three pieces, weighing together about 6 lb., were found at Calcutta in the "Coal and Iron Committee's" collection, and were probably obtained from Assam (H. Piddington, *Journ. Asiatic Soc. Bengal*, 1846, vol. 15, Proc. pp. xlv, lxxvi). Described by W. von Haidinger (*Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1860, vol. 41, p. 752).

301 grams in Calcutta (Mus. Geol. Surv. India), 188 grams in Paris (Mus. d'Hist. Nat.).

Specimens : [33760], 357 grams ; [34798], 182 grams.

Assisi, Perugia, Italy.

Fell 1886, May 24, 7 a.m.

Synonyms : Perugia ; Torre Assisi.

Stone. Spherical chondrite.

A stone of about 2 kg. fell (G. Bellucci, *Il meteorito di Assisi*, Perugia, Tipografia di Vincenzo Santucci, Perugia, 1887).

275 grams in Budapest (Hung. Nat. Mus.), 227 grams in Turin University.

Specimens : [63621], 151 grams ; [92565], 5 grams.

Atacama, v. Cachiyuyal ; Dehesa ; Imilac.

Atacama Desert, v. Copiapo ; Joel's Iron ; Ilimacs ; Lutschaunig's Stone.

***Atemajac, Sierra de Topalpo, Jalisco, Mexico.**

Fell 1896, Feb. 26.

Stone. Grey chondrite.

32 grams in Chicago (Field Mus. Nat. Hist.) (O. C. Farrington, *Cat. Coll. Meteorites*, Field Mus. Nat. Hist., Chicago, 1916, p. 238).

Atobe, v. Gifu.

Aubres, Nyons, Drôme, France.

Fell 1836, Sept. 14, 3 p.m.

Synonym : Nyons.

Stone. Aubrite (enstatite-achondrite).

A stone of about 800 grams was seen to fall (J. R. Gregory, *Geol. Mag.*, 1887, vol. 4, p. 552).

Specimen : [63552], the greater part of the stone, 487 grams, and fragments, 16 grams.

Auburn, Lee (formerly Macon) County, Alabama, U.S.A.

Found 1867.

Synonym : Macon County.

Iron. Hexahedrite.

A mass of about 8 lb. was ploughed up near East Alabama College (C. U. Shepard, *Amer. Journ. Sci.*, 1869, vol. 47, p. 230). Described by E. Cohen with analysis by O. Hildebrand (*Meteoritenkunde*, 1905, Heft 3, p. 215), Ni = 4.67% ($n = 20$).

251 grams in Washington (U.S. Nat. Mus.).

Specimen : [43683], 37 grams.

Augusta, v. Castine.

Augusta County, v. Staunton.

Augustinovka, Ekaterinoslav, Ukraine.

Found 1890.

Synonym : Ekaterinoslav.

Iron. Fine octahedrite.

A mass of about 400 kg. was found in loess (V. F. Alexejev (Aleksyev), *Verh. Russ. Min. Gesell.*, 1893, vol. 30, p. 475; S. Meunier, *Comptes Rendus Acad. Sci. Paris*, 1893, vol. 116, p. 1151; and A. von Kupffer, *Ann. Naturhist. Hofmus. Wien*, 1911, vol. 25, p. 436, fig.). Possibly identical with Verkhne Dnieprovsk as suggested by Kupffer (*l.c.*, p. 438).

Main mass in Petrograd (Mus. Mining Inst.) in 1897.

Specimen : [83956], a slice, 950 grams.

Aukoma, v. Pillistfer.

Aumale, Alger, Algeria.

Fell 1865, Aug. 25, between 11 a.m. and 12 noon.

Synonym : Senhadja.

Stone. Veined white chondrite.

Two stones, each of about 25 kg., fell, about 3 miles apart, one in "tribe" of Senhadja, the other in "tribe" of Ouled Sidi Salem (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1866, vol. 62, p. 72).

9½ kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [1920,282], 58 grams; [84190], 25 grams; [41108], 9 grams.

Aumières, Lozère, France.

Fell 1842, June 3, 9 p.m.

Synonym : Lozère.

Stone. Veined white chondrite.

A single stone of about 2 kg. fell after appearance of a luminous meteor. (J. de Malbos, *Comptes Rendus Acad. Sci. Paris*, 1842, vol. 14, p. 917).

1.4 kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [71575], 43 grams; [34596], $\frac{1}{2}$ gram.

Aussun, Haute Garonne, France.

Fell 1858, Dec. 9, 7.30 a.m.

Synonyms : Clarac; Montréjeau.

• Stone. Spherical chondrite.

Two stones, weighing respectively about 9 and 41 kg., fell, the first near Aussun and the other near Clarac, about 3 miles distant (F. Petit, *Comptes Rendus Acad. Sci. Paris*, 1858, vol. 47, p. 1053). Analysed by G. Chancel and A. Moitessier (*ibid.*, 1859, vol. 48, pp. 267 and 479).

1.7 kg. in Paris (Mus. d'Hist. Nat.), 1 kg. in Edinburgh (Royal Scottish Mus.), 1 kg. in Vienna (Naturhist. Mus.).

Specimens : [31987], Aussun, 334 grams; [90273], Clarac, 110 grams; [1920,283], 110 grams; [55531], 32 grams.

Austin, v. Denton County; Wichita County.

***Australia**.

Found 1880.

Stony-iron. Pallasite.

90 grams in Harvard College labelled as above by J. L. Smith (O. W. Huntington, *Proc. Amer. Acad. Arts and Sci.*, Boston, 1888, vol. 23, p. 99). Doubtful.

Authon, v. Lancé.

***Avče**, Isonzo Valley, Gorizia, Italy.

Fell 1908, March 31, 8.45 a.m.

Iron. Hexahedrite.

A mass of 1230 grams fell, after detonations (F. Berwerth, *Anz. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1908, vol. 45, p. 298).

Avgušinovka, v. Augustinovka.

***Avilez**, Cuencamé, Durango, Mexico.

Fell 1855, June.

Stone. Grey or spherical chondrite.

Several stones are said to have fallen, but only fragments, including a piece of 146 grams, were preserved (F. Wöhler, *Nachr. Gesell. Wiss. Göttingen*), 1867, p. 57; and L. Häpke, *Abhand. u. Jahresber. Naturwiss. Ver. Bremen*, 1883-4, vol. 8, p. 515).

142 grams in Göttingen University.

Aztec, v. Holbrook.

Babb's Mill, Greene County, Tennessee, U.S.A.

Found 1842.

Synonyms : Blake's Iron; Greene County; Troost's Iron.

Iron. Nickel-rich ataxite.

Two masses were ploughed up 10 miles north of Greenville, one (Troost's Iron) of 14 lb. in 1842 (G. Troost, *Amer. Journ. Sci.*, 1845, vol. 49, p. 342), and the other (Blake's Iron) of about 300 lb., in 1876 (W. P. Blake, *ibid.*, 1886, vol. 31, p. 41). Both irons described by E. Cohen, with analyses by J. Fahrenhorst (*Meteoritenkunde*, 1905, Heft 3, p. 104), Ni for Troost's Iron = 17.30% ($n = 5$), for Blake's Iron 11.05% ($n = 8$). Etched structure described by F. Berwerth (*Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1918, vol. 127, Abt. 1, p. 415, 2 pls.).

Main mass of Blake's Iron in Vienna (Naturhist. Mus.).

Specimen : [18490], Troost's Iron, 2127 grams.

Bachmut, Ekaterinoslav, Ukraine.

Fell 1814, Feb. 15, noon.

Synonyms: Alexejevka; Ekaterinoslav; Scholakov.

Stone. White hypersthene-chondrite.

A stone of 18 kg. fell, after detonations (F. von Giese, Ann. Phys. (Gilbert), 1815, vol. 50, p. 117). Analysed by A. Kuhlberg (Arch. Naturk. Liv-, Ehat- u. Kurlands, Ser. i, Min. Wiss., Dorpat, 1867, vol. 4, p. 18), $f = 6\frac{1}{2}$, $n = 4$, $m = 3$.

A piece of about 8 kg. was sent to Kharkov, and two pieces of 4 kg. to Ekaterinoslav; 1.6 kg. in Vienna (Naturhist. Mus.).

Specimens: [46012], 35 grams; [35153], 2 grams; [35162], 2 grams; [34614], $1\frac{1}{2}$ gram.

Bacubirito, Sinaloa, Mexico.

Found 1863.

Synonyms: El Ranchito; Ranchito; Sinaloa.

Iron. Finest octahedrite.

A huge mass, 12 ft. long and estimated to weigh 27 tons, was found on the farm El Ranchito 7 miles south of Bacubirito (H. A. Ward, Proc. Rochester Acad. Sci., 1902, vol. 4, p. 67; L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 151; and E. Angermann, Parergones Inst. Geol. Mexico, 1904, vol. 1, no. 4, p. 113, fig.). Analysed by E. Cohen and O. Hildebrand (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 281), Ni = 9.4% ($n = 9\frac{1}{2}$).

The main mass is still in its original position.

Specimens: [84235], 615 grams; [86070], 470 grams; [84236], $61\frac{1}{2}$ grams.

Bulger, v. Sacramento Mountains.

Baffin's Bay, v. Cape York.

Bahia, v. Bendegó.

Baird's Farm, v. Asheville.

Baird's Plantation, v. Asheville.

***Bald Eagle, Williamsport, Lycoming County, Pennsylvania, U.S.A.**

Found 1891.

Synonyms: Park Hotel; Williamsport.

Iron. Medium octahedrite.

A mass of about 7 lb. was found on the east side of Bald Eagle Mountain (H. A. Ward, Proc. Rochester Acad. Sci., 1902, vol. 4, pp. 79, 86). Analysed by W. G. Owens (Amer. Journ. Sci., 1892, vol. 43, p. 423), Ni = 7.56% ($n = 12$).

Main mass in Bucknell University, Lewisburg, Pennsylvania.

Baldohn, v. Misshof.

Ballinoo, Murchison River, Western Australia.

Found 1892.

Iron. Finest octahedrite.

A mass of 93 lb. was found 10 miles south of Ballinoo (T. Cooksey, Rec. Australian Mus. Sydney, 1897, vol. 3, p. 55; and H. A. Ward, Amer. Journ. Sci., 1898, vol. 5, p. 136). Described by E. Cohen with analysis by O. Sjöström (Sitzungsber. Akad. Wiss. Berlin, 1898, p. 19; and Meteoritenkunde, 1905, Heft 3, p. 284), Ni = 9.87% ($n = 9$). Traces of Pd and Ru.

detected by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 22).

11 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens : [81732], 3160 grams ; [1920,285], an etched slice, 395 grams.

Bambuk, v. Siratik.

Bancoorah, v. Shalka.

Bandera County, v. Pipe Creek.

Bandong, Java.

Fell 1871, Dec. 10, 1.30 p.m.

Stone. Amphoterite (rodite).

Six stones, of total weight of about 11½ kg., fell, after detonations : described by G. A. Daubrée with analysis by C. L. Vlaanderen (Comptes Rendus Acad. Sci. Paris, 1872, vol. 75, p. 1676), $f = 3$, $n = 2$, $m = 1$.

8 kg. in Batavia, 2 kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [1920,286], 46 grams ; [48760], 11½ grams.

Banja, v. Soko-Banja.

***Banswal**, Dehra Dun district, United Provinces, India.

Fell 1913, Jan. 12, 6 p.m.

Stone. Grey chondrite.

After appearance of brilliant luminous meteor (moving from N.W. to S.E.), and detonations, a single stone fell, but only about 14 grams of fragments were recovered (J. Coggin Brown, Rep. Geol. Surv. India, 1913, vol. 43, pt. 3, pp. 237-240).

13 grams in Calcutta (Mus. Geol. Surv. India).

Baratta, v. Barratta.

Barbotan, Landes, France.

Fell 1790, July 24, 9 p.m.

Synonyms : Agen ; Landes ; Roquefort.

Stone. Veined grey chondrite.

A shower of stones, the largest of 9 kg., fell after detonations, and appearance of fire-ball travelling from S. to N. (— Baudin, Ann. Phys. (Gilbert), 1803, vol. 13, p. 346). Described by H. Pfahler (Tschermaks Min. Petr. Mitt., 1893, vol. 13, p. 353).

1 kg. in Tübingen University, 618 grams in Vienna (Naturhist. Mus.).

Specimens : [56548], a complete stone, 515 grams ; [18582], 145 grams ; [90244], 122 grams ; [1920,287], 8 grams.

Barcelona, v. Canellas ; Nulles.

Báré, v. Mocs.

***Barea**, Logrono, Spain.

Fell 1842, July 4.

Synonym : Logrono.

Stony-iron. Mesosiderite.

A stone of about 7 lb. fell (R. P. Greg, Phil. Mag., 1854, vol. 8, p. 460). Described by S. Meunier (Comptes Rendus Acad. Sci. Paris, 1872, vol. 75, p. 1547) and by A. F. Gredilla (Estudio Meteoritos, Madrid, 1892, p. 101). Main mass in Madrid.

***Barntrup, Lippe, Germany.**

Fell 1886, May 28.

Synonyms : Krähenholz; Lippe.

Stone. Veined intermediate chondrite.

A small stone of 17 grams fell, after detonations (L. Hapke, Abhand. Naturwiss. Ver. Bremen, 1889, vol. 11, p. 323).

9½ grams in Detmold, 6 grams in Vienna (Naturhist. Mus.).

Baroti, Bilaspur, Simla Hill States, Punjab, India.

Fell 1910, Sept. 15, 10 a.m.

Stone. White hypersthene-chondrite.

One stone of about 10 lb. fell (G. de P. Cotter, Rec. Geol. Surv. India, 1912, vol. 42, p. 273). Described and analysed by G. T. Prior (Mineral. Mag., 1913-14, vol. 17, pp. 22, 132), $f = 9$, $n = 6\frac{1}{2}$, $m = 3\frac{1}{2}$.

Specimens : [1912,555], 858 grams; [1912,556], three fragments, 78 grams.

Barraba, County Darling, New South Wales.

Date of find unknown.

Iron. Nickel-poor ataxite.

A mass of about 3 lb. was found : described and analysed by J. C. H. Mingaye (Rec. Geol. Surv. New South Wales, 1904, vol. 7, p. 308.) $Ni = 5.54\%$ ($n = 17$). Probably identical with Bingera and Warialda. Largest pieces in Sydney (Mining and Geol. Mus.), and Vienna (Naturhist. Mus.).

Specimen : [1916,2], a slice, 107 grams.

Barranca Blanca, Corno Caballo Pass, Atacama, Chile.

Found 1855.

Synonym : San Francisco Pass.

Iron. Brecciated octahedrite.

A mass of about 12 kg. was found between Copiapo and Catamarca : described and analysed by L. Fletcher (Mineral. Mag., 1889, vol. 8, p. 262), $Ni = 8.01\%$ ($n = 11$).

Specimen : [41187], the main mass, 11,910 grams, and pieces, 88 grams.

Barratta, Deniliquin, County Townsend, New South Wales.

Found 1845.

Synonyms : Baratta; Deniliquin.

Stone. Black chondrite.

Four stones, weighing respectively about 145, 31, 48, and 175 lb., were found at different times. The first stone, described by A. Liversidge (Trans. Roy. Soc. New South Wales, 1872, vol. 6, p. 97), was found in 1845; the second and third in 1889, and these were also described by A. Liversidge, with analysis of No. 2 (Journ. and Proc. Roy. Soc. New South Wales, 1902, vol. 36, p. 350). The fourth stone was acquired by H. A. Ward in 1902 (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 35).

The main masses of the two first stones in Sydney (Australian Mus.), of the third and fourth in Chicago (Field Mus. Nat. Hist.).

Specimens : [86428], a piece of the fourth stone, 2678 grams; [83339], a piece of the first stone, 46½ grams; [1920,288], 45 grams.

Bartlett Meteorite, v. Tucson.

Bassein, v. Quenggouk.

Basti, v. Bustee.

Bates County, v. Butler.

Batesville, v. Joe Wright Mountain.

Bath, Brown County, South Dakota, U.S.A.

Fell 1892, Aug. 29, 4 p.m.

Synonym : Aberdeen.

Stone. Brecciated spherical chondrite.

One stone of about 46 $\frac{3}{4}$ lb. fell, after detonations (A. E. Foote, Amer. Journ. Sci., 1893, vol. 45, p. 64). Microscopic characters described by G. P. Merrill (Mem. Nat. Acad. Sci. Washington, 1919, vol. 14, mem. 4, p. 1.)

About 3 kg. in Chicago (Field Mus. Nat. Hist.), 3 kg. in Vienna (Naturhist. Mus.), 2.8 kg. in New York (Amer. Mus. Nat. Hist.), 2 kg. in Harvard University.

Specimen : [71526], 2119 grams.

Bath Furnace, Bath County, Kentucky, U.S.A.

Fell 1902, Nov. 15, 6.45 p.m.

Stone. Intermediate chondrite.

A stone of about 13 lb. was seen to fall, after detonations and appearance of luminous meteor (H. A. Ward, Amer. Journ. Sci., 1903, vol. 15, p. 316). Two other stones, of about $\frac{1}{2}$ lb. and 177 lb. respectively, were found later (A. H. Miller, Science, New York, 1903, vol. 18, p. 243). The smallest stone was described by O. C. Farrington (Publ. Field Columbian Mus. Chicago, 1907, Geol. Ser., vol. 3, p. 111), and the largest by H. A. Ward (Proc. Rochester Acad. Sci., 1905, vol. 4, p. 193 fig.).

The largest stone in Chicago (Field Mus. Nat. Hist.).

Specimen : [86427], 1013 grams.

Bathurst, v. Cowra.

Batsura, v. Butsura.

Battle River, v. Iron Creek.

Beaconsfield, v. Cranbourne.

Bear Creek, Jefferson County, Colorado, U.S.A.

Found 1866.

Synonyms : Aeriotospos; Colorado; Denver; Jefferson County.

Iron. Fine octahedrite.

A mass of about 500 lb. was found : described by C. U. Shepard and — Henry (Amer. Journ. Sci., 1866, vol. 42, pp. 250 and 286), and by E. Cohen (Meteoritenkunde, 1905, Heft. 3, p. 299). Analysed by J. L. Smith (Amer. Journ. Sci., 1867, vol. 44, p. 66), Ni = 14% ($n = 6$).

Main mass in Amherst College.

Specimens : [41030], 45 $\frac{1}{2}$ grams; [40878], 7 grams.

Bear River, v. Bear Creek.

Beaufort, v. Orange River (stone).

Beaugency, v. Charsonville.

Beaver Creek, West Kootenay district, British Columbia.

Fell 1893, May 26, 3.30 p.m.

Stone. Crystalline spherical bronzite-chondrite.

One stone of about 31 lb. fell (E. E. Howell, *Science*, New York, 1893, p. 41). Described by E. E. Howell and G. P. Merrill and analysed by W. F. Hillebrand (*Amer. Journ. Sci.*, 1894, vol. 47, p. 430), $f = 17$, $n = 10$, $m = 4\frac{1}{2}$.

The main mass was in Howell's collection in 1897.

Specimens : [73646], 685½ grams; [1920,289], 36 grams.

Bécasse, v. La Bécasse.

Behar, v. Sherghotty.

Belaja-Zerkov, v. Bjelaja-Zerkov.

Belgorod, v. Sevrukovo.

Belgradjek, v. Virba.

Bella Roca, Sierra de San Francisco, Santiago Papasquiario, Durango, Mexico.

Known 1888.

Synonyms : La Bella Roca; Papasquiario.

Iron. Fine octahedrite.

A mass of about 73 lb. was found (L. Fletcher, *Mineral. Mag.*, 1890, vol. 9, p. 155); described and analysed by J. E. Whitfield (*Amer. Journ. Sci.*, 1889, vol. 37, p. 439). Also described by E. Cohen with analysis by R. Knauer (*Meteoritenkunde*, 1905, Heft 3, p. 374), $Ni = 9.78\%$ ($n = 9$).

12½ kg. in Vienna (*Naturhist. Mus.*).

Specimen : [64206], a slice, 3537 grams.

Belley, v. Groslée.

Belmont, v. Simonod.

Bemdego, v. Bendegó.

Benares, United Provinces, India.

Fell 1798, Dec. 19, 8 p.m.

Synonym : Krakhut.

Stone. Spherical chondrite.

Many stones, one of about 2 lb. through the roof of a hut, fell at Krakhut, about 14 miles from Benares, after appearance of a luminous meteor and detonations (E. Howard, *Phil. Trans. Roy. Soc. London*, 1802, pp. 168, 175; *Ann. Phys. (Gilbert)*, 1812, vol. 41, p. 453).

662 grams in Vienna (*Naturhist. Mus.*), 388 in Tübingen University.

Specimens : [61310], a complete stone, 190 grams; [90247], 184 grams; [61311], 136 grams.

Bendegó, Bahia, Brazil.

Found 1784.

Synonym : Bahia.

Iron. Coarse octahedrite.

A large mass of about 5 tons was found near the rivulet called the Bendegó (A. F. Mornay and W. H. Wollaston, *Phil. Trans. Roy. Soc. London*, 1816, vol. 106, pp. 270, 281, fig.). It was removed to Rio de Janeiro in 1888, and was described and analysed by O. A. Derby (*Rev. Mus. Nac. Rio de Janeiro*, 1896, vol. 1, p. 89), $Ni = 6.8\%$ ($n = 13$).

Main mass in Rio de Janeiro.

Specimens : [19962], 2220 grams; [66585], 899 grams; [1911,718] 520½ grams.

***Bendock**, County Croajingolong, Victoria, Australia.

Found 1898.

Stony-iron. Pallasite.

A mass of about 60 lb. was found: described and analysed by J. C. H. Mingaye (Ann. Rep. Dept. Mines, New South Wales for 1898, 1899, p. 21; and Rep. Australian Assoc. Adv. Sci. for 1902, 1903, p. 162), Ni = 7.81 % ($n = 10$).

Berar, v. Chandakapur.**Beraun**, v. Zebrak.**Berdjansk**, v. Berdyansk; Pavlograd.***Berdyansk**, Taurida, south Russia.

Known 1878.

Synonym: Berdjansk.

Stone. Pallasite (?).

A mass of 2½ kg. was described by M. Hiriakov and A. A. Inostrantzev (Géol. Förén. Förhandl. Stockholm, 1878, vol. 4, p. 72).

Berlanguillas, Buigos, Spain.

Fell 1811, July 8, 8 p.m.

Synonym: Burgos.

Stone. Veined intermediate chondrite.

Three stones, one of about 2½ kg., fell (L. W. Gilbert, Ann. Phys. (Gilbert), 1812, vol. 40, p. 116, and vol. 41, p. 452).

1 kg. in Paris (Mus. d'Hist. Nat.).

Specimens: [90259], 16½ grams; [44133], 10 grams.

Bethany, Great Namaqualand, South Africa.

Known before 1836.

Synonyms: Amalia Farm; Cabaya; Gibeon; Goamus Farm;

Great Fish River; Great Namaqualand; Lion River;

Mukerop; Namaqualand; Springbok River; Wild.

Iron. Fine octahedrite.

Large masses (2 feet square) were reported by J. E. Alexander near east bank of *Great Fish River* and three days' journey N.E. from Bethany (Journ. Roy. Geogr. Soc. London, 1838, vol. 8, p. 24). A mass of 178 lb., found near *Lion River*, was described by C. U. Shepard (Amer. Journ. Sci., 1853, vol. 15, p. 1) and analysed by O. Sjöström (E. Cohen, Ann. Naturhist. Hofmus. Wien, 1897, vol. 12, p. 43). A fragment of 9 grams was found with label "*Springbok River*" among Dr. H. J. Burkart's minerals after his death in 1874 (L. Fletcher, Mineral. Mag., 1904, vol. 14, p. 28, full bibliography of the Bethany masses). A mass (*Great Namaqualand*) of about 510 lb., long known to the missionaries of Bethany, thence carried to Orange River, and finally brought to Cape Town and lodged in the South African Museum by J. Wild about 1857, was described by E. Cohen with analysis by J. Fahrenheitst (Ann. South African Mus., Cape Town, 1900, vol. 2, part 2, p. 21). Four large masses of about 392, 400, 653, and 1107 lb., found in 1899 at *Mukerop*, Gibeon, were described by A. Brezina and E. Cohen and analysed by O. Hildebrand (Jahresh. Ver. Vaterl. Naturk. Württemberg, 1902, vol. 58, p. 292). Three further masses of about 933, 682, and 561 lb. from *Gibeon* were found in 1903 (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 341). A mass of about 890 lb., found on the farm *Goamus*, near Gibeon, was described by F. Rinne in 1910 (Neues Jahrb. Min., 1910, Bd. 1, p. 115). The percentage of Ni found in *Lion River*, *Bethany*, and *Mukerop* is about 8% ($n = 11$).

Structure of Mukerop described by F. Berwerth (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1902, vol. 111, Abt. 1, p. 646).

The main mass of "Bethany" in Cape Town (South African Museum), 138 kg. of Mukerop in Stuttgart (Natur.-Kab.), 61 kg. of Mukerop in Vienna (Naturhist. Mus.), 45 kg. of Mukerop and 9 kg. of "Amalia" in Chicago (Field Mus. Nat. Hist.).

Specimens : [1910,753], a slice of Goamus, 6610 grams; [1909,4], Gibeon, 5130 grams; [85891], a slice of Mukerop, 4320 grams; [54729], Bethany, a piece of the 510 lb. mass, 1434 grams; [1921,386], an end slice of Goamus, 1206 grams; [32048], Lion River, 388 grams; [1921,190], Mukerop, 123 grams; [63885], Springbok River, 9 grams; [1911,716], Great Fish River, presented by J. E. Alexander to Geol. Soc., London, in 1838, 2 grams.

Bethlehem, Albany County, New York, U.S.A.

Fell 1859, Aug. 11, 7.30 a.m.

Synonyms : Albany County; Troy.

Stone. Crystalline spherical chondrite.

After appearance of luminous meteor, and detonations, a small stone about the size of a pigeon's egg was seen to fall (D. A. Wells, Proc. Boston Soc. Nat. Hist., 1859, vol. 7, p. 176). Described by C. U. Shepard (Amer. Journ. Sci., 1860, vol. 30, p. 206, fig.).

8 grams in Albany (New York) Museum.

Specimen : [34593], fragments, less than a gram.

Beuste, Pau, Basses-Pyrénées, France.

Fell 1859, May, afternoon.

Synonyms : Buuste; Pau.

Stone. Brecciated grey chondrite.

Two fragments of about $1\frac{1}{2}$ kg. and $\frac{1}{2}$ kg. were found, about 700 metres apart (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1873, vol. 76, p. 315).

861 grams in Paris (École des Mines), 420 grams in Pau Museum.

Specimens : [64340], 37 grams; [48757], 3 grams.

***Bezerros, Pernambuco, Brazil.**

Fell 1915, May 9.

Iron.

Original weight estimated at 20 tons (H. Michel, Fortschritte Min. Krist. Petr., Jena, 1922, vol. 7, p. 258).

Bhagur, West Khandesh district, Bombay, India.

Fell 1877, Nov. 27, 6 p.m.

Synonyms : Dhulia; Khandesh district.

Stone. Veined white chondrite.

After appearance of luminous meteor over Dhulia and other places in the Khandesh district, a stone, of weight unrecorded, fell near the village of Bhagur (E. Cordeaux, Journ. Bombay Branch Roy. Asiatic Soc., 1878, vol. 14, no. 36, Abst. of Soc. Proc. pp. iii-vi).

7 grams in Vienna (Naturhist. Mus.), $2\frac{1}{2}$ grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [64511], 6 grams.

Bhawalpur for Bahawalpur, v. Khairpur.

Bherai, Junagarh, Kathiawar, Bombay, India.

Fell 1893, April 28, 8 a.m.

Synonym: Kathiawar.

Stone. Veined white hypersthene-chondrite.

After appearance of luminous meteor, and detonations, a stone of less than $\frac{1}{2}$ lb. fell near the village of Kovaya, between Bherai and Jafferabad (J. W. Judd, *Nature*, London, 1893, vol. 49, p. 32).

A partial analysis made on 0.4 gram gave $f = 8\frac{1}{2}$, $n = 6$ (G. T. Prior).

Specimen: [76802], $17\frac{1}{2}$ grams.**Bholghati**, Deoli pargana, Maurbhanj, Orissa, India.

Fell 1905, Oct. 29, 8.30 a.m.

Stone. Howardite.

Two stones of about 2 lb. and $3\frac{1}{2}$ lb. fell, after detonations (L. L. Fermor, *Rec. Geol. Surv. India*, 1907, vol. 35, p. 83, figs.).

A nearly complete stone (1 kg.) in Calcutta (*Mus. Geol. Surv. India*).

Specimen: [1915,140], fragment of the 2-lb. stone, 28 grams.

Bhurtpur, v. Kheragur; Moti-ka-nagla.**Bialystok**, Grodno, Poland.

Fell 1827, Oct. 5, 9.30 a.m.

Synonyms: Jasly; Knasta.

Stone. Howardite.

A shower of stones fell, of which four, of total weight of 4 kg., were found, the largest weighing about 2 kg. (*Ann. Chim. Phys.*, Paris, 1828, vol. 39, p. 421; and A. Göbel, *Bull. Acad. Sci. St.-Petersbourg*, 1867, vol. 11, p. 270).

120 grams in Kiev University, 112 grams in Petrograd (*Mus. Acad. Sci.*) in 1897.

Specimens: [54640], $3\frac{1}{2}$ grams; [35154], less than a gram.*Bibandi*, v. Dokachi.**Blelokryntschie**, Zaslavl, Volhynia, Ukraine.

Fell 1887, Jan. 1, 6 p.m.

Stone. Veined spherical chondrite.

After appearance of fire-ball moving from S.W. to N.E., and detonations, several stones were seen to fall of which eight were found, the largest weighing about 2 kg. (J. de Siemaschko (Y. I. Simashko), *Cat. Météorites*, 1891, p. 51; V. Agafanov, *Trav. Soc. Nat. St.-Petersbourg*, 1891, vol. 21, p. xx). Described by G. P. Merrill (*Mem. Nat. Acad. Sci. Washington*, 1919, vol. 14, mem. 4, p. 1).

Specimens: [66213], $53\frac{1}{2}$ grams; [1920,291], 7 grams.*Big Skookum*, v. Klondike.**Billings**, Christian County, Missouri, U.S.A.

Found 1903.

Synonym: Christian County.

Iron. Coarse octahedrite.

A mass of about 54 lb. resembling an axe was found about 4 miles east of Billings: described by H. A. Ward and O. C. Farrington and analysed by

H. W. Nichols (Amer. Journ. Sci., 1905, vol. 19, p. 240), Ni = 7.38% ($n = 12\frac{1}{2}$).

Over 13 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [1905,52], a slice, 633 grams.

***Binda**, Crookwell, County King, New South Wales.

Found 1912.

Stone. Eucrite.

A mass of 12 lb. was found; it possibly fell on the night of May 25, 1912, when a luminous meteor was seen and detonations heard: described by C. Anderson and analysed by J. C. H. Mingayo (Rec. Australian Mus. Sydney, 1913, vol. 10, p. 49), $m = 2$.

Main masses in Sydney (Australian Mus. and Technol. Mus.).

Bingera, County Murchison, New South Wales.

Found 1880.

Iron. Nickel-poor ataxite.

A pear-shaped mass of about $\frac{1}{2}$ lb. was found: described and analysed by A. Liversidge (Journ. Roy. Soc. New South Wales, 1882 (1883), vol. 16, p. 35), Ni = 4.39% ($n = 21$). On etching shows a granular structure (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 233). Probably identical with Barraba and Warialda.

Main mass in Sydney (Mining and Geol. Mus.), 85 grams in Vienna (Naturhist. Mus.).

Specimen : [1916,3], a slice, 15 grams.

Bischtübe, Nikolaev, Turgai, Siberia.

Found 1888.

Synonyms : Nikolaev; Turgai.

Iron. Coarse octahedrite.

Three masses, of about 32, 16, and $\frac{1}{2}$ kg. respectively, were ploughed up (E. D. Kislakovsky, Bull. Soc. Naturalistes Moscou, 1890 (1891), vol. 4, no. 2, p. 187, fig.). Analysed by — Scherer and O. Sjöström (E. Cohen, Ann. Naturhist. Hofmus. Wien, 1897, vol. 12, p. 55), Ni = 6.48% ($n = 14\frac{1}{2}$).

24 kg. in Petrograd (Mus. Mining Inst.) in 1897.

Specimens : Three slices, [84372], 1663 grams; [1920,290], 263 grams; [67039], 87 grams.

***Bishop Canyon**, San Miguel County, Colorado, U.S.A.

Found 1912.

Iron. Fine octahedrite.

A mass of 19 lb. was found 4 miles west of Bishop Canyon: described by O. C. Farrington (Field Mus. Nat. Hist. Chicago, 1914, Publ. 178, Geol. Ser., vol. 5, no. 1, p. 3).

Main mass in Chicago (Field Mus. Nat. Hist.).

Bishopville, Sumter County, South Carolina, U.S.A.

Fell 1843, March 25.

Synonym : Sumter County.

Stone. Aubrite (enstatite-achondrite).

A stone of about 13 lb. fell, after detonations (C. U. Shepard, Amer. Journ. Sci., 1848, vol. 6, p. 411). Analysed by J. L. Smith (*ibid.*, 1864, vol. 38, p. 225), C. Rammelsberg (Meteoriten, Berlin, 1870, p. 121), and

J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 12). Described by G. Tschermak (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1893, vol. 88, pp. 363, 367).

1 kg. in Washington (U.S. Nat. Mus.), 50.7 grams in Tübingen University

Specimen: [20795], 509 grams.

Bishunpur, Mirzapur district, United Provinces, India.

Fell 1895, April 26, 3 p.m.

Synonym: Parjabatpur.

Stone. Black chondrite.

Four stones fell, after detonations, but only two were recovered, viz. one of 942 grams at Bishunpur, and the other of 97 grams at Parjabatpur a mile distant (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 31; also, translation of police report dated May 7, 1895, in Min. Dept., British Museum).

400 grams in Calcutta (Mus. Geol. Surv. India).

Specimens: [80339], Bishunpur, 359 grams; [80340], Parjabatpur, 33½ grams.

Bissempore, v. Shaŕka.

Bithurg, Trier, Rhenish Prussia.

Known before 1805.

Synonyms: Albacher Mühle; Eifel; Trier.

Stony-iron. Pallasite.

A mass of about 1½ tons most of which had been smelted in a furnace was seen in 1805 by Col. Gibbs (Bruce's Amer. Mineral. Journ., 1814, vol. 1, p. 219; E. F. F. Chladni, Ann. Phys. (Gilbert), 1819, vol. 60, p. 242). Analysed by — Finkener (Zeits. Deutsch. Geol. Gesell., 1879, vol. 31, p. 635), Ni = 10.51% ($n = 8$). Only a little of the unaltered material has been preserved (Centralblatt Min., 1920, p. 1).

Over 58 kg. of smelted material in Berlin Museums.

Specimens: [13406], 1325 grams; [90218], oxidized fragments, 171 grams; [33198], 23 grams; [33933], 15½ grams; [33920], 13½ grams; [25463], 2½ grams.

Bithur, v. Futtehpur.

Bjelaja Zerkov, Kiev, Ukraine.

Fell 1796, Jan. 15.

Synonyms: Belaja Zerkov; Kiev.

Stone. Spherical chondrite.

A fairly big stone fell with "usual phenomena" (A. Stoikovitz, Ann. Phys. (Gilbert), 1809, vol. 31, p. 307).

1.4 kg. in Kiev University in 1897.

Specimens: [54638], two pieces, 7 grams; [43195], 2 grams.

Bjelokrynitschie, v. Bielokrynitschie.

Bjurh le, Borg , Nyland, Finland.

Fell 1899, March 12, 10.30 p.m.

Stone. Spherical hypersthene-chondrite.

One stone fell through the sea-ice and broke into fragments, the largest of which weighed 80 kg., the total weight being about 330 kg.: described

and analysed by W. Ramsay and L. H. Borgström (Bull. Comm. Géol. Finlande, 1902, no. 12, p. 1), $f = 7$, $n = 9$, $m = 3\frac{1}{2}$.

The largest piece in Helsingfors (Geol. Kom.), the next largest in Stockholm (Riksmus.), over 6 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [86138], 153 grams.

Blaauw-Kapel, v. Utrecht.

Black Mountain, 15 miles east of Asheville, Buncombe County, North Carolina, U.S.A.

Found about 1839.

Synonyms : Asheville; Buncombe County.

Iron. Coarse octahedrite.

A piece of about 21 oz. was described by C. U. Shepard (Amer. Journ. Sci., 1847, vol. 4, p. 82).

About $3\frac{1}{2}$ kg. in Amherst College.

Specimens : [34578], 53 grams; [33958], 18 grams.

Blake's Iron, v. Babb's Mill.

***Blanket**, Brown County, Texas, U.S.A.

Fell 1909, May 30, 10.30 p.m.

Stone.

Stones of 1.6 and 1.5 kg. fell (O. C. Farrington, Cat. Coll. Meteorites, Field Mus. Nat. Hist. Chicago, 1916, p. 243, pl. 62).

Both stones in Chicago (Field Mus. Nat. Hist.).

Blansko, Brno, Moravia, Czechoslovakia.

Fell 1833, Nov. 25, 6.30 p.m.

Stone. Veined grey bronzite-chondrite.

A shower of stones fell, after appearance of fire-ball and detonations, and eight, weighing altogether 350 grams, were found some days later (F. von Reichenbach, Neues Jahrb. Min., 1834, p. 125; and Ann. Phys. (Poggendorff), 1865, vol. 124, p. 213). Analysed by J. J. Berzelius (*ibid.*, 1834, vol. 33, p. 8), $f = 17$, $n = 15$, $m = 3\frac{1}{2}$. Another stone of about 120 grams was found in 1866 (*ibid.*, 1869, vol. 136, p. 446).

88 grams in Tübingen University, 69 grams in Vienna (Naturhist. Mus.).

Specimen : [35170], less than a gram.

***Blithfield**, Renfrew County, Ontario, Canada.

Found 1910.

Stone.

A stone of 1830 grams was found (letter of R. A. A. Johnston of July 8, 1920, in Min. Dept., British Museum).

Main mass in Ottawa (Mus. Geol. Surv. Canada).

Blount County, v. Summit.

***Blue Tier**, County Dorset, N.E. coast of Tasmania.

Found before 1893.

Synonym : Tasmania.

Iron. Medium octahedrite.

A mass of about 3 lb. was found (C. Anderson, Rec. Australiag. Mus. Sydney, 1913, vol. 10, p. 56).

Main mass, in 1913, in Launceston (in the possession of Mrs. W. F. Petterd).

Bluff, Fayette County, Texas, U.S.A.

Found about 1878.

Synonyms: Fayette County; La Grange.

Stone. Brecciated crystalline hypersthene-chondrite.

A stone of about 320 lb. was found 3 miles S.W. of La Grange: described by G. P. Merrill and analysed by J. E. Whitfield (Amer. Journ. Sci., 1888, vol. 36, p. 113). Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 352), $f = 5$, $n = 6\frac{1}{2}$.

Specimens: [64204], a large slice, 12,401 grams, a piece, 132 grams, and fragments, 6 grams.

Bobrik, v. Kharkov.**Bocas, San Luis Potosi, Mexico.**

Fell 1804, Nov. 24.

Synonyms: Hacienda de Bocas; Ramos; San Luis Potosi.

Stone. White chondrite.

Original weight and details of fall unknown: small fragments of the stone were said by A. Castillo to be preserved in the School of Engineers in Mexico (A. Castillo, Cat. Météorites Mexique, Paris, 1889, p. 13; and H. J. Burkart, Verh. Naturhist. Ver. Bonn, 1865, vol. 22, p. 71).

9 grams in Paris (Mus. d'Hist. Nat.).

Specimens: [92564], labelled *Ramos* (Mexico), 35 grams; [40768], less than a gram.

Bogota, v. Rasgata (under Santa Rosa).***Boguslavka, 220 km. north of Vladivostok, Siberia.**

Fell 1916, Oct. 18, 11.47 a.m.

Iron. Hexahedrite.

Two masses of 199 kg. and 57 kg. fell (H. Backlund, Bull. Acad. Sci. Petrograd, 1916, vol. 10, p. 1817; and Geol. Fören. Förhandl. Stockholm, 1917, vol. 39, p. 105), Ni = 5.25%.

Main masses in Petrograd (Mus. Acad. Sci.).

Bohumilitz, Vimperk (= Winterberg), Bohemia.

Found 1829.

Synonym: Prachin.

Iron. Coarse octahedrite.

A mass of about 57 kg. was found near Castle Bohumilitz (Verh. Gesell. Vaterl. Mus. Böhmen, 1830, Heft 8, April 3, pp. 15, 26, fig.; and Brewster's Edinburgh Journ. Sci., 1830, vol. 3, p. 310). Analysed by O. Köstler (E. Cohen and E. Weinschenk, Ann. Naturhist. Hofmus. Wien, 1891, vol. 6, p. 144), Ni = 7.72% ($n = 12$).

38 kg. in Prague (Bohemian Museum), 2½ kg. in Vienna (Naturhist. Mus.).

Specimens: [35726], 97 grams; [1920,292], an etched slice, 61 grams; [34613], 21 grams.

Bois de Fontaine, v. Charsonville.**Bokkeveld, v. Cold Bokkeveld.****Bolson de Mapimi, v. Coahuila.****Bonanza Iron, v. Coahuila.**

Boogaldi, Coonabarabran, County Baradine, New South Wales.
Found 1900.

Synonym : Bugaldi.

Iron. Fine octahedrite.

A pear-shaped mass of about $4\frac{1}{2}$ lb. was found about 2 miles from Boogaldi (R. T. Baker, Journ. and Proc. Roy. Soc. New South Wales, 1900, vol. 34, p. 81, figs.). Described and analysed by A. Liversidge (*ibid.*, 1902, vol. 36, p. 341, figs.), Ni = 8.05% ($n = 11$).

Main mass in Sydney (Technol. Mus.).

Specimen : [86924], a slice, 179 grams.

Borgo San Donnino, Parma, Italy.

Fell 1808, April 19, noon.

Synonyms : Cusignano; Parma; Piacenza.

Stone. Grey chondrite (howarditic chondrite of Brezina).

Several stones fell, after detonations, the largest weighing about 1 kg. (L. W. Gilbert, Ann. Phys. (Gilbert), 1808, vol. 29, p. 209).

477 grams in Parma University, 264 grams in Vienna (Naturhist. Mus.).

Specimen : [19975], $9\frac{1}{2}$ grams.

Bori, Betul district, Central Provinces, India.

Fell 1894, May 9, 4 p.m.

Stone. Veined intermediate chondrite.

A stone of about 19 lb. fell (J. Coggin Brown, Mem. Geol. Surv. India, 1916, vol. 43, pt. 2, p. 174).

5 kg. in Calcutta (Mus. Geol. Surv. India).

Specimen : [77431^c], 1270 grams.

Borkut, Marmoros, Ruthenia, Czechoslovakia.

Fell 1852, Oct. 13, 3 p.m.

Synonym : Marmoros.

Stone. Spherical chondrite.

A stone of about 7 kg. fell, after detonations : described by F. Leydolt and analysed by J. Nurcsany (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1856, vol. 20, p. 398).

Over 3 kg. in Tübingen University.

Specimen : [35168], 40 grams.

Borodino, Moscow, Russia.

Fell 1812, Sept. 5, 1 a.m.

Synonyms : Kolotscha; Stonitza.

Stone. Brecciated grey chondrite.

The fall of a stone of about $\frac{1}{2}$ kg. is said to have been observed by a soldier on guard before the battle of Borodino (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 40, and letter of Y. I. Simashko of June 20, 1892, in Min. Dept., British Museum).

Main mass (320 grams) in Petrograd (Mus. Mining Inst.) in 1897.

Specimen : [1911,140], $1\frac{1}{2}$ grams.

***Botetourt** County, Virginia, U.S.A.

Found 1850.

Iron. Nickel-rich ataxite.

"A large mass not easily transported on horseback" was found (C. U. Shepard, Amer. Journ. Sci., 1866, vol. 42, p. 250). Fragments referred to Botetourt have been described by E. Cohen and analysed by O. Sjöström (Meteoritenkunde, 1905, Heft 3, p. 114), Ni = about 17% ($n = 5$).

The large mass appears to have been lost and may possibly not have been meteoric (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 397).

***Botschetschki, Kursk, Russia.**

Fell end of 1823.

Synonyms: Kursk; Putiwl.

Stone. Grey chondrite.

A stone of 614 grams, in 1824, was acquired by the Museum of Academy of Sciences of Petrograd (G. von Blöde, Bull. Acad. Sci. St.-Petersbourg 1848, vol. 6, pp. 5-6; A. Göbel, *ibid.*, 1867, vol. 11, p. 256).

Böttcher Id., v. Mauritius.

Bourbon-Vendée, v. Chantonay; St. Christophe la Chartreuse.

Bourdeaux, v. Mornans.

Bozett, v. Cross Roads.

Bradley County, v. Cleveland.

Bragin, v. Brahın.

Brahın, Minsk, Russia.

Found 1810.

Synonyms: Bragin; Brahın; Kruki; Krukov; Minsk; Rokičky. Stony-iron. Pallasite.

Two masses, of about 80 kg. and 20 kg. respectively, were found in 1810 (Ann. Phys. (Gilbert), 1819, vol. 63, p. 32); and a third of 183 kg. recently (P. I. Gristchinsky, Ann. Géol. Min. Russ., 1911, vol. 13, p. 72). Analysed by A. A. Inostrantzev (Verh. Russ. Min. Gesell. St. Petersburg, 1869, vol. 4, p. 307): the iron also analysed by L. L. Ivanov (Ann. Géol. Min. Russ., 1911, vol. 13, p. 111), Ni = 8.38% ($n = 10\frac{1}{2}$); and the olivine by K. I. Timofeev (*ibid.*, 1912, vol. 14, p. 169), $m = 7$.

87 kg. in Kiev University, 3 $\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.).

Specimen: [33965], 22 grams.

Brambanan, v. Prambanan.

Bramydor, v. Tomatlan.

Brandenburg, v. Linum; Seeläsgen.

Braunau, Trutnov, Bohemia.

Fell 1847, July 14, 3.45 a.m.

Synonyms: Broumov; Hauptmannsdorf.

Iron. Hexahedrite.

Two masses, of about 22 kg. and 17 kg., fell at Hauptmannsdorf, after detonations and appearance of luminous cloud (C. C. Beinert, Ann. Phys. (Poggendorff), 1847, vol. 72, p. 70, figs.). Structure described by J. G. Neumann (Haidinger's Naturwiss. Abhand. Wien, 1850, vol. 3, Abt. 2, p. 45). Analysed by A. Duflos and N. W. Fisher (Ann. Phys. (Poggendorff), 1847, vol. 72, p. 475), and by R. Knauer (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 207), Ni = 5.21% ($n = 15$).

The smaller mass in 1897 was intact in the abbey of Braunau, the larger has been distributed.

Specimens: [33954], 522 grams; [90217], 32 grams.

Brazos, v. Red River.

Brazos River, v. Wichita County.

Breitenbach, v. Steinbach.

Bremervörde, Hanover, Germany.

Fell 1855, May 13, 5 p.m.

Synonyms: Gnarrenburg; Stade.

Stone. Brecciated spherical bronzite-chondrite.

Several stones (five at least) fell, after detonations, near the village of Gnarrenburg; the total weight was about $7\frac{1}{2}$ kg. and the largest stone weighed about $2\frac{1}{2}$ kg. (Ann. Phys. (Poggendorff), 1856, vol. 98, p. 609). Analysed by F. Wöhler (*ibid.*, p. 619), $f = 23$, $n = 12$.

2.8 kg. in Göttingen University, 1 kg. in Clausthal (Bergakad.).

Specimens: [33910], 808 grams; [33739], 18 grams; [1920,305], 2 grams.

Brenham Township, Kiowa County, Kansas, U.S.A.

Found 1882.

Synonyms: Haviland Township; Kiowa County.

Stony-iron. Pallasite.

About twenty masses were found, weighing together about 2000 lb. and varying in weight from 1 oz. to 466 lb.: described by G. F. Kunz and analysed by L. G. Eakins (Amer. Journ. Sci., 1890, vol. 40, p. 312), Ni of iron = 10.35% ($n = 9$), m of olivine = 8. Also described by N. H. Winchell and analysed by J. A. Dodge (Amer. Geol., 1890, vol. 5, p. 309, and vol. 6, p. 370, figs.). Many other small masses, weighing mostly less than 1 lb., were found in 1892 (R. Hay, Amer. Journ. Sci., 1892, vol. 43, p. 80).

Nearly 500 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [66202], 1502 grams; [68725], 506 grams.

Brescia, v. Alfianello.

Bridgewater, Burke County, North Carolina, U.S.A.

Found 1890.

Synonyms: Burke County; Fairweather.

Iron. Fine octahedrite.

A mass of 30 lb. was found by a ploughman 2 miles from Bridgewater Station: described by G. F. Kunz and analysed by F. P. Venable (Amer. Journ. Sci., 1890, vol. 40, p. 320), Ni = 9.94% ($n = 9$).

$8\frac{1}{4}$ kg. in Vienna (Naturhist. Mus.).

Specimen: [77094], a slice, 51 grams.

Brookville, v. Rushville.

Broumov, v. Braunau.

Bubuowly, v. Supuhee.

Bückeberg, v. Obernkirchen.

Budetin, v. Gross-Divina.

Buenos Aires, v. El Perdido.

Bueste, v. Beuste.

Bugaldi, v. Boogaldi.

Bulloah, v. Butsura.

Buncombe County, v. Asheville; Black Mountain.

Bunzlau, v. Lissa; Ploschkovitz.

Burggraf, v. Elbogen.

Bur-Gheluai, Bur-Hagaba district, Italian Somaliland.

Fell 1919, Oct. 16, 8 a.m.

Synonym: Bur-Hagaba.

Stone. Grey chondrite.

A shower fell of over 100 stones, of total weight of about 120 kg., the largest of 15.4 kg. (letter of Oct. 20, 1921, of A. Neviani in Min. Dept., British Museum; and Boll. Soc. Geol. Ital., 1921, vol. 40, p. xx).

Specimens: [1922,10], a complete stone, 2145 grams; [1922,11], fragments, 27 grams.

Burgos, v. Berlanguillas.

Bur-Hagaba, v. Bur-Gheluai.

Burke County, v. Bridgewater; Linville.

Burlington, Otsego County, New York, U.S.A.

Found before 1819.

Synonyms: Cooperstown; Otsego County.

Iron. Medium octahedrite.

A mass of about 150 lb. was ploughed up, but only about 12 lb. has been preserved: described by B. Silliman and analysed by C. H. Rockwell (Amer. Journ. Sci., 1844, vol. 46, p. 401). Also analysed by W. S. Clark (Inaug.-Diss. Göttingen, 1852, p. 62), Ni = 8.90% ($n = 10$).

1½ kg. in Washington (U.S. Nat. Mus.).

Specimens: [14621], 175 grams; [90223], 115 grams; [46983], 22 grams.

Buschhof, Zemgale, Latvia.

Fell 1863, June 2, 7.30 a.m.

Synonym: Scheikahr Stattan.

Stone. Veined white hypersthene-chondrite.

A stone of about 5 kg. fell, after detonations (G. Rose, Ann. Phys. (Poggendorff), 1863, vol. 120, p. 619). Described and analysed by C. Grewingk and C. Schmidt (Arch. Naturk. Liv-, Ehst- und Kurlands, Ser. 1, Min. Wiss., Dorpat, 1864, vol. 3, pp. 452, 473), $f = 5$, $n = 2$, $m = 2\frac{1}{2}$.

1.3 kg. in Dorpat University, 828 grams in Vienna (Naturhist. Mus.).

Specimens: [36269], 98 grams; [1920,293], fragments, 64 grams.

Bustee, between Gorakhpur and Fyzabad, Basti district, United Provinces, India.

Fell 1852, Dec. 2, 10 a.m.

Synonyms: Basti; Goruckpur.

Stone. Aubrite (enstatite-achondrite).

A stone of about 3-4 lb. fell, after detonations: described by N. S. Maskelyne with analyses by W. Flight (Phil. Trans. Roy. Soc. London, 1870, vol. 160, p. 193), the stone is brecciated and has a large nodule rich in oldhamite and diopside and containing osbornite.

Specimen: [32100], the greater part of the stone, 1398 grams, and fragments, 36 grams.

Butcher Iron, v. Coahuila.

Butler, Bates County, Missouri, U.S.A.

Found before 1874.

Synonym : Bates County.

Iron. Finest octahedrite.

A mass of about 90 lb. was ploughed up 8 miles S.W. of Butler (G. C. Broadhead, Amer. Journ. Sci., 1875, vol. 10, p. 401). Described by A. Brezina (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1881, vol. 82, Abt. 1, p. 348), and analysed by J. L. Smith (Amer. Journ. Sci., 1877, vol. 13, p. 213), Ni = 10.02% ($n = 9$).

14 kg. in Harvard University.

Specimens : [53292], 315 grams; [67222], 74 grams.

Butsura, Champaran district, Bihar, India.

Fell 1861, May 12, about noon.

Synonyms : Batsura; Bulloah; Chireya; Gorukhpur; Piprassi; Qutahar Bazar.

Stone. Intermediate chondrite.

Five stones fell, after detonations, two of 5 and 7 oz., respectively, at Bulloah, one of 11 lb. at Piprassi, one of 28½ lb. at Qutahar Bazar, and one of 8½ lb. at Chireya; all could be fitted together showing that they formed part of one mass (N. S. Maskelyne and V. von Lang, Phil. Mag., 1863, vol. 25, p. 50).

7½ kg. in Calcutta (Mus. Geol. Surv. India).

Specimens : [34794], the main mass of Qutahar Bazar, 12,980 grams, and fragments, 4 grams; [34796], the main mass of Piprassi, 5095 grams; [34795], Chireya, 843 grams; [34797], Bulloah, 158 grams.

Cabarras County, v. Monroc.

Cabarrus County, v. Monroc.

Cabaya, v. Great Fish River (under Bethany).

Cabeza de Mayo, Murcia, Spain.

Fell 1870, Aug. 18, 6.15 a.m.

Synonyms : Cabezzo de Mayo; Murcia.

Stone. White chondrite.

A stone of about 25 kg. fell, after detonations (J. M. Solano y Eulate, Anal. Soc. Españ. Hist. Nat. Madrid, 1872, vol. 1, p. 77).

520 grams in Madrid (Mus. Cienc. Nat.).

Specimens : [1920,354], 61 grams; [54636], 3½ grams.

Cabezzo de Mayo, v. Cabeza de Mayo.

Cabin Creek, Johnson County, Arkansas, U.S.A.

Fell 1886, March 27, 3 p.m.

Synonym : Johnson County.

Iron. Medium octahedrite.

A mass of about 107 lb. fell, after detonations, about 6 miles east of Cabin Creek : described by G. F. Kunz (Amer. Journ. Sci., 1887, vol. 33, p. 494), and analysed by J. E. Whitfield (*ibid.*, p. 500).

Main mass in Vienna (Naturhist. Mus.).

Specimen : [67453], 5 grams.

Cacak, v. Guča; Jelica.

Cacaria, Durango, Mexico.

Found 1867.

Iron. Medium octahedrite (Hammond octahedrite).

A mass of 41.4 kg. was used as an anvil in Durango and was later removed to the Mexican National Museum (A. Castillo, Cat. *Météorites Mexique*, Paris, 1889, p. 5; L. Fletcher, *Mineral. Mag.*, 1890, vol. 9, p. 154). Described by E. Cohen with analysis by J. Fahrenhorst (*Meteoritenkunde*, 1905, Heft 3, p. 400), Ni = 7.70% ($n = 12$) on Vienna mass, Ni = 12.06% ($n = 7$) on a specimen obtained by H. A. Ward from the main mass in Mexico City (National Mus.).

Specimen : [84883], a slice from the mass in the Mexican National Museum, 310 grams.

***Cachari**, Azul, Buenos Aires, Argentina.

Found 1916.

Stone. Eucrite (?).

A stone of 23½ kg. was found at a depth of 1½ metres (M. Kantor, Cat. Col. *Meteoritos*, Rev. Mus. La Plata, 1920, vol. 25, p. 118). Analysed by E. H. Ducloux (*l.c.*).

Main mass in La Plata Museum.

Cachiyuyal, Atacama, Chile.

Found 1874.

Synonym : Atacama.

Iron. Medium octahedrite.

A mass of about 2½ kg. was found about 20 leagues from the coast (I. Domeyko, *Comptes Rendus Acad. Sci. Paris*, 1875, vol. 81, p. 597).

Main mass in Santiago Museum, 760 grams in Chicago (Field Mus. Nat. Hist.), 350 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [71570], a slice, 28½ grams.

***Cadell**, east side of River Murray, South Australia.

Found 1910.

Stone.

A stone of 7½ lb. was found 3 miles from Morgan (C. Anderson, *Rec. Australian Mus. Sydney*, 1913, vol. 10, p. 57).

Main mass in Adelaide (South Australian Mus.).

Caille, v. La Caille.

***Calderilla**, Caldera, Atacama, Chile.

Fell 1883 (?).

Stony-iron. Pallasite.

A fragment of 21 grams, said to have fallen in 1883, was given to H. A. Ward by E. Gigoux at Copiapo in 1889 (E. E. Howell, *Proc. Rochester Acad. Sci.*, 1890, vol. 1, p. 100).

19 grams in Vienna (Naturhist. Mus.).

Callac, v. Kerilis.

Cambria, Niagara County, New York, U.S.A.

Found 1818.

Synonym : Lockport.

Iron. Fine octahedrite.

A mass of 36 lb. was turned up by the plough (B. Silliman, *Amer. Journ. Sci.*, 1845, vol. 48, p. 388). Analysed by C. Rammelsberg (*Monatsber.*

Akad. Wiss. Berlin, 1870, p. 444), Ni = 10.65% ($n = 8$). Described by E. Cohen (Meteoritenkunde, 1905, Heft 3, p. 312).

3 kg. in Yale University.

Specimen: [19005], the largest piece preserved, 5329 grams.

Campo del Cielo, v. Otumpa.

Campo del Pucará, v. Imilac.

Cañada de Hierro, v. Tucson.

Canara, v. Udipi.

Canellas, Barcelona, Spain.

Fell 1861, May 14, 1.30 p.m.

Synonyms: Barcelona; Canyelles; Vilanova de Sitjes; Villa Nueva.

Stone. Intermediate chondrite.

Several stones fell, after detonations, near Villa Nueva, but most were lost, or broke into fragments the largest of which weighed only 18 oz. (R. P. Greg, Phil. Mag., 1861, vol. 22, p. 107; M. Faura i Sans, Butll. Centr. Excurs. Catalunya, 1921, vol. 31, no. 322, p. 277, fig.).

$\frac{1}{2}$ kg. in Madrid (Mus. Cienc. Nat.).

Specimen: [35781], $1\frac{1}{2}$ grams.

Caney Fork, v. Smithville.

Cangas de Onís, Asturias, Spain.

Fell 1866, Dec. 6, 11 a.m.

Synonyms: Elgueras; Oviedo.

Stone. Brecciated gréy chondrite.

A shower of stones fell, after detonations, the largest stone weighing about 11 kg.: described and analysed by J. R. Luanco (Anal. Soc. Españ. Hist. Nat. Madrid, 1874, vol. 3, p. 69).

$3\frac{1}{2}$ kg. in Sevilla University, 2 kg. in Paris (Mus. d'Hist. Nat.), 400 grams in Madrid (Mus. Cienc. Nat.).

Specimen: [54813], 97 grams.

Canoncito, v. Glorieta Mountain.

Cañon Diablo, Coconino County, Arizona, U.S.A.

Found 1891.

Synonyms: Arizona; Canyon Diablo.

Iron. Coarse octahedrite.

Numerous masses, of a total weight of over 5 tons and ranging from minute fragments to pieces of over 1000 lb., have been found in the neighbourhood of a crater-like elevation known as Coon Butte, "Crater mountain," or "Meteor crater," 10 miles south-east of Cañon Diablo (A. E. Foote, Amer. Journ. Sci., 1891, vol. 42, p. 413). Said to contain diamond (H. Moissan, Comptes Rendus Acad. Sci. Paris, 1904, vol. 139, p. 773). Analysed by J. E. Whitfield (Amer. Journ. Sci., 1913, vol. 35, p. 513), Ni = 7.33% ($n = 12$). "Meteor crater" is supposed to be the result of the impact of the meteorite (D. M. Barringer, Proc. Acad. Nat. Sci. Philadelphia, 1905, vol. 57, p. 861, and 1914, vol. 66, p. 556; G. P. Merrill, Smithsonian Misc. Coll. Washington, 1907-8, vol. 50, pp. 203, 461).

Over 2300 kg. in Chicago (Field Mus. Nat. Hist.), 998 kg. in Washington (U.S. Nat. Mus.).

Specimens: [68578], a large cavernous mass, 65,170 grams; [77188], 13,630 grams; [67592], 3008 grams; [83025], 1532 grams; [68248], oxidized, 128 grams; [69138], 29 grams.

Canton, Cherokee County, Georgia, U.S.A.

Found 1894.

Synonyms : Cherokee County; Cherokee Mills.

Iron. Medium octahedrite.

- A mass of $15\frac{1}{2}$ lb. was ploughed up about 5 miles south-west of Canton : described by E. E. Howell and analysed by H. N. Stokes (Amer. Journ. Sci., 1895, vol. 50, p. 252, fig. of etched surface), Ni = 6.70% ($n = 14$). The etched figure is that of a medium and not a coarsest octahedrite, but differs from that of Losttown in showing less plessite (G. T. Prior).

668 grams in Chicago (Field Mus. Nat. Hist.).

Specimen : [80684], a slice, 330 grams.

*Canyelles, v. Canellas.**Cany Fork, v. Smithville.***Canyon City, Trinity County, California, U.S.A.**

Found 1875.

Synonym : Trinity County.

Iron. Medium octahedrite.

A mass of about 19 lb. was found 3 miles north-east of Canyon City : described by H. A. Ward and analysed by J. M. Davison (Amer. Journ. Sci., 1904, vol. 17, p. 383), Ni = 7.85% ($n = 11\frac{1}{2}$).

4½ kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [86944], 193 grams.

*Canyon Diablo, v. Cañon Diablo.****Caparrosa, S.W. of Chilpanzingo, Guerrero, Mexico.**

Known 1858.

Synonyms : Chilpanzingo; Rincon de Caparrosa.

Iron.

A nodule of 341 grams is said to have been found in a piece of copper-pyrites (A. Castillo, Cat. Méteorites Mexique, Paris, 1889, p. 1). Referred to Toluca by A. Brezina.

Cape Girardeau, Cape Girardeau County, Missouri, U.S.A.

Fell 1846, Aug. 14, 3 p.m.

Stone. Spherical bronzite-chondrite.

A stone of about 5 lb. fell with a loud report $7\frac{1}{2}$ miles south of Cape Girardeau : described by E. S. Dana and analysed by S. L. Penfield (Amer. Journ. Sci., 1886, vol. 32, p. 229), $f = 18$, $n = 12$, $m = 4\frac{1}{2}$.

Main mass in Yale University, New Haven.

Specimen : [64342], $78\frac{3}{4}$ grams.*Cape Iron, v. Cape of Good Hope.***Cape of Good Hope, Cape Province, South Africa.**

Found 1793.

Synonyms : Cape Iron; Great Fish River; Kapeisen.

Iron. Nickel-rich ataxite.

- A mass of about 300 lb. was found between Sunday River and Bushman River (west of Great Fish River) (J. Barrow, Account of Travels into the Interior of Southern Africa, London, 1801, vol. i, p. 226; A. von Dankelmann,

J. H. Voight's Mag. Naturkunde, 1805, vol. 10, p. 3). Described by E. Cohen with analyses by J. Fahrenhorst (Meteoritenkunde, 1905, Heft 3, p. 138), Ni = 15.67% ($n = 6$).
67 kg. in Budapest (Hung. Nat. Mus.), 947 grams in Vienna (Naturhist. Mus.).

Specimens: [54646], 288 grams; [46975], 18 grams; [90221], 16½ grams; [15143], 4½ grams; [33746], 1 gram.

Caperr, Rio Senguerr, Chubut Territory, Patagonia.

Known 1869.

Synonym: Amakaken.

Iron. Medium octahedrite.

A large mass weighing 251 lb. was seen by Capt. Musters in 1869, and by Dr. F. P. Moreno in 1896 who secured it for the La Plata Museum: described and analysed by L. Fletcher (Mineral. Mag., 1899, vol. 12, p. 167), Ni = 9.33% ($n = 9½$).

Specimens: [1906,53], a slice, 256 grams; [84134], 57 grams.

Cape York, West Greenland.

Known 1818.

Synonyms: Ahnighito; Baffin's Bay; Melville Bay; Ross's Iron; Sowallick Mountains.

Iron. Medium octahedrite.

Knives of iron with bone handles were given to Capt. John Ross in 1818 by the Eskimos of Prince Regent's Bay (John Ross, Voyage of Discovery in Baffin's Bay, London, 1819, pp. 102-18). Three large masses, weighing respectively about 36½ tons, 3 tons, and 1000 lb. and named "The Tent" or Ahnighito, "The Woman," and "The Dog," were shown in 1894 to Lieut. R. E. Peary, by whom later they were transported to New York (R. E. Peary, Northward over the Great Ice, London, 1898, vol. 2, pp. 145, 553, 600). Analysed by J. E. Whitfield (E. O. Hovey, Amer. Mus. Nat. Hist. New York, Guide Leaflets, 1907, no. 26, p. 23, figs.), Ni = about 8% ($n = 11$).

The three masses are in New York City (Amer. Mus. Nat. Hist.).

Specimens: [87561-2], Eskimo knives, one figured in Ross's Voyage of Discovery (*l.c.*, above).

Capitan Range, *v.* El Capitan Range.

Caracoles, *v.* Imilac.

Caratash, Smyrna, Asia Minor.

Fell 1902, Aug. 22, 8 p.m.

Stone. Amphoterite.

After appearance of fire-ball and detonations, a stone about as "big as a melon" fell (Bull. Soc. Astron. France, 1902, p. 486; and letter of A. S. Anastassiadhis of Jan. 22, 1903, in Min. Dept., British Museum).

The main mass was sent to Constantinople. In thin-section this stone presents precisely the same characters as Manbhoom (G. T. Prior).

Specimen: [86521], 8 grams.

Carcoar, *v.* Cowra.

Carcote, western Cordilleras, Atacama, Chile.

Known 1888.

Stone. Crystalline bronzite-chondrite.

Original weight unknown : a piece of 79 grams was sent to Antofagasta as a 'silver-ore' : described by F. von Sandberger (*Neues Jahrb. Min.*, 1889, Bd. 2, p. 173). Analysed by W. Will and J. Pinnow (*Ber. Deutsch. Chem. Gesell. Berlin*, 1893, vol. 23; p. 345), $f = 10$, $n = 10$, $m = 3$.

208 grams in Würzburg University.

Specimen : [67454], $2\frac{1}{2}$ grams.**Carleton Iron**, v. Tucson.**Carlsburg** for Karlsburg, v. Ohaba.**Carlton**, Hamilton County, Texas, U.S.A.

Found 1887.

Synonyms : Carlton-Hamilton; Hamilton County.

Iron. Fine octahedrite.

A mass of 179 lb. was ploughed up : described by E. E. Howell and analysed by L. G. Eakins (*Amer. Journ. Sci.*, 1890, vol. 40, p. 223), $Ni = 12.77\%$ ($n = 7\frac{1}{2}$).

9 kg. in Chicago (*Field Mus. Nat. Hist.*), $7\frac{1}{2}$ kg. in Vienna (*Naturhist. Mus.*), 3 kg. in Harvard University.

Specimen : [65970], a slice, 6180 grams.

Carlton-Hamilton, v. Carlton.**Carnavelpattu**, v. Mulletiwu.***Carrawena**, South Australia.

Main mass in Adelaide, South Australia. A cast in the British Museum Collection. No description yet published.

Carrisalillo, v. Vaca Muerta.**Carroll County**, v. Eagle Station.**Carsie**, v. Strathmore.**Carthage**, Smith County, Tennessee, U.S.A.

Found 1840.

Synonyms : Coney Fork; Smith County.

Iron. Medium octahedrite.

A mass of about 280 lb. was found : described by G. Troost (*Amer. Journ. Sci.*, 1846, vol. 2, p. 356). Analysed by E. Bořický (*Neues Jahrb. Min.*, 1866, p. 808), $Ni = 7.72\%$ ($n = 11\frac{1}{2}$).

64 kg. in Tübingen University.

Specimen : [20793], a large mass, 24610 grams ($54\frac{1}{4}$ lb.).**Carthago**, v. Carthage.**Caryfort**, v. Carthage; Smithville.**Casale**, v. Cereseto; Motta di Conti.**Casas Grandes** de Malintzin, Chihuahua, Mexico.

Recognised 1867.

Synonym : Chihuahua.

Iron. Medium octahedrite.

A mass of 3407 lb. was found in an ancient tomb (E. G. Tarayre, Arch. Comm. Sci. Mexique, Paris, 1867, vol. 3, p. 348). As suggested by L. Kletcher, this was the mass presented to the Smithsonian Institute in 1876 (Mineral. Mag., 1890, vol. 9, p. 119). Described by W. Tassin (Proc. U.S. Nat. Mus. Washington, 1902, vol. 25, p. 69, pl. 1). Analysed by O. Hildebrand (E. Cohen, Mitt. Naturwiss. Ver. Neu-Vorpommern u. Rügen, Greifswald, 1903, Jahrg. 35, p. 7) and by J. E. Whitfield (G. P. Merrill, Amer. Journ. Sci., 1913, vol. 35, p. 514), $Ni = 7.74\%$ ($n = 12$).

Main mass in Washington (U.S. Nat. Mus.).

Specimen : [85481], a slice, 989 grams.

Casey County, Kentucky, U.S.A.

Known 1877.

Iron. Coarse octahedrite.

Original weight unknown. First mentioned by J. L. Smith (Amer. Journ. Sci., 1877, vol. 14, p. 246). Described by A. Brezina (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1880, vol. 82, Abt. 1, p. 351).

289 grams in Harvard University.

Specimen : [53294], 45 grams.

Casignano for *Cusignano*, v. Borgo San Donnino.

Castalia, Nash County, North Carolina, U.S.A.

Fell 1874, May 14, 2.30 p.m.

Synonym : Nash County.

Stone. Brecciated grey bronzite-chondrite.

After detonations, "a dozen or more" stones fell over an area of 10×3 miles; only three, of 1 kg., 800 grams, and $5\frac{1}{2}$ kg., were found: described and analysed by E. L. Smith (Amer. Journ. Sci., 1875, vol. 10, p. 147), $f = 15$, $n = 15$, $m = 4$.

The $5\frac{1}{2}$ kg. stone in Vienna (Naturhist. Mus.).

Specimen : [50804], 29 grams.

Castine, Hancock County, Maine, U.S.A.

Fell 1848, May 20, 4 a.m.

Synonym : Augusta.

Stone. Veined white hypersthene-chondrite.

A stone of about 3 oz. was seen to fall after appearance of fire-ball and detonations: described and iron analysed by C. U. Shepard (Amer. Journ. Sci., 1848, vol. 6, p. 251).

29 $\frac{1}{2}$ grams in Amherst College.

Specimen : [34592], 2 $\frac{1}{2}$ grams.

***Castray River, tributary of the Heazlewood River, N.W. Tasmania.**

Found 1899.

Iron.

Three pieces, each of about 50 grams, were found (W. F. Petterd, Proc. Roy. Soc. Tasmania, 1900-1 (1902), p. 48, fig.).

Main mass, in 1913, in Launceston (in the possession of Mrs. W. F. Petterd).

Catorce, v. *Descubridora*.

***Cedar, Fayette County, Texas, U.S.A.**

Found 1900.

Stone. Veined spherical chondrite.

Three stones of $16\frac{1}{2}$, 12, and $2\frac{1}{2}$ lb. were found, and are said to differ from Bluff in microscopic characters (G. P. Merrill, Proc. U.S. Nat. Mus. Washington, 1918, vol. 54, p. 557, 2 pls.).

Cedar Creek, v. Alexander County.

Central Missouri, U.S.A.

- Found about 1855.

Iron. Coarsest octahedrite.

A mass of about 55 lb. was found: described by H. L. Preston, with analysis by the firm of Mariner and Hoskins (Amer. Journ. Sci., 1900, vol. 9, p. 285).

About $2\frac{1}{2}$ kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [84554], a slice, 988 grams.

Cereseto, Casale, Piedmont, Italy.

Fell 1840, July 17, 7.30 a.m.

Synonyms: Casale; Ottiglio; Piedmont.

Stone. Brecciated spherical chondrite.

A stone of about 5 kg. fell, after detonation and appearance of fire-ball (Ann. Phys. (Poggendorff), 1840, vol. 50, p. 668).

3.4 kg. in Turin University.

Specimens: [33960], $102\frac{1}{2}$ grams; [33297], $21\frac{1}{2}$ grams.

Cerralvo, v. Coahuila.

Cerro Cosina, v. Cosina.

Cerro la Bomba, v. Vaca Muerta.

***Ceylon (pseudo-meteorite).**

Two pieces of iron of 23 and 21 grams, in the Museum of Practical Geology, London, labelled "Ceylon, found 1869 in the hands of the natives, working into charms as 'Lightning Iron,'" are referred to by E. A. Wülfing (Die Meteoriten in Sammlungen, Tübingen, 1897, p. 389): contains no nickel (G. T. Prior).

Chaharwala, v. Charwallas.

Chall, Allahabad, United Provinces, India.

Fell 1814, Nov. 5, 4.30 p.m.

Synonym: Allahabad.

Stone. Brecciated white chondrite.

Nineteen stones, some of them up to 30 lb. in weight, were said to have fallen in the Doab, after detonations (Phil. Mag., 1815, vol. 46, p. 155).

Specimen: [63874], the only known specimen, $\frac{1}{2}$ gram.

Chainpur, Azamgarh district, United Provinces, India.

Fell 1907, May 9, 1.30 p.m.

Stone. Spherical chondrite.

Several stones appear to have fallen after detonations near villages on the borders of Ghazipur and Azamgarh districts, and about 18 lb. of fragments were recovered, including one from Chainpur weighing about 12 lb. (G. de P. Cotter, Rec. Geol. Surv. India, 1912, vol. 42, p. 268).

8 kg. in Calcutta (Mss. Geol. Surv. India).

Specimen: [1915,86], 399 grams.

***Chambord, Lake St. John County, Quebec, Canada.**

Found 1904.

Iron. Medium octahedrite.

A mass of 6.6 kg. was found (R. A. A. Johnston, *The Ottawa Naturalist*, 1906, vol. 20, p. 51).

***Chañaral, Atacama, Chile.**

Found 1884.

Iron. Medium octahedrite.

A sickle-shaped mass of 1207 grams was found: described by H. A. Ward with analysis by H. W. Nichols (*Proc. Rochester Acad. Sci.*, 1906, vol. 4, p. 230). Possibly identical with Merceditas and Ilimaes.

Main mass in Santiago (School of Mines).

Chañaral, v. Merceditas.

Chañarlino, v. Merceditas.

Chandakapur, Berar, Central Provinces, India.

Fell 1838, June 6, noon.

Synonym: Berar.

Stone. Brecciated intermediate hypersthene-chondrite.

Three stones, weighing respectively about 11, $7\frac{1}{2}$, and 1 lb., fell, after detonations, at the villages Chandakapur, Denulgaon, and Burguon: described by H. L. Bowman and analysed by H. E. Clarke (*Mineral. Mag.*, 1910, vol. 15, p. 350). Amount and composition of the nickel-iron determined by G. T. Prior (*ibid.*, 1919, vol. 18, p. 353), $f = 8$, $n = 9$.

6 kg. in Oxford University, $2\frac{1}{2}$ kg. in Edinburgh (Roy. Scot. Mus.).

Specimens: [16354], 521 grams; [16868], 225 grams.

Chandpur, Mainpuri district, United Provinces, India.

Fell 1885, April 6.

Synonym: Mainpuri.

Stone. Veined white chondrite.

After detonations, a stone of about $2\frac{1}{2}$ lb. was heard to fall and was found next day 5 miles N.W. of Mainpuri (H. B. Medlicott, *Rec. Geol. Surv. India*, 1885, vol. 18, p. 148).

384 grams in Calcutta (Mus. Geol. Surv. India).

Specimen: [56444], about half the stone, $490\frac{1}{2}$ grams.

***Changanorein, Cochin State, India.**

Fell 1918, July 3, 12.45 p.m.

Stone. Veined white chondrite.

Seven fragments, the largest weighing 713 grams, were obtained by the Calcutta Museum (H. H. Hayden, *Rec. Geol. Surv. India*, 1918, vol. 49, pt. 1, p. 8).

Main mass in Calcutta (Mus. Geol. Surv. India).

Chantonay, Vendée, France.

Fell 1812, Aug. 5, 2 a.m.

Synonyms: Bourbon-Vendée; La Rochelle.

Stone. Brecciated grey hypersthene-chondrite.

A stone of $31\frac{1}{2}$ kg. fell, after appearance of a fire-ball and detonations (— Cavoleau, *Ann. Phys. (Gilbert)*, 1819, vol. 63, p. 228). Described by G. Tschermak (*Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1874, vol. 70, p. 465) and analysed by C. Rammeisberg (*Zeits. Deutsch. Geol. Gesell.*, 1870, vol. 22, p. 889), $f = 8$, $n = 6$, $m = 3\frac{1}{2}$.

$2\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.), nearly 2 kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [90261], 582 grams ; [33905], 531½ grams ; [33906], 239. grams ; [33190], 48 grams.

Charca, v. La Charca.

Charcas, San Luis Potosi, Mexico.

• Known 1804.

Synonym : San Luis Potosi.

Iron. Medium octahedrite.

A mass of over 780 kg. was mentioned by F. T. Sonnenschmid (Tablas Mineralógicas, Mexico, 1804, p. 288) as standing at the corner of the churchyard at Charcas, and was said to have been brought from San José del Sitio, 12 leagues distant : in 1886 it was removed to Paris (L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 160). Described by G. A. Daubrée (Comptes Rendus Acad. Sci. Paris, 1867, vol. 64, pp. 633, 636). Possibly identical with Descubridora (L. Fletcher, *l.c.*).

Main mass in Paris (Mus. d'Hist. Nat.).

Specimens : [68957], 295 grams ; [41109], 38½ grams.

Charkov, v. Kharkov.

Charles County, v. Nanjemoy.

Charleston, v. Jenny's Creek.

Charlotte, Dickson County, Tennessee, U.S.A.

Fell 1835, July 31 or Aug. 1, 2-3 p.m.

Synonym : Dickson County.

Iron. Fine octahedrite.

A "drop-shaped" mass of about 9½ lb. fell, after detonation and vivid light (G. Troost, Amer. Journ. Sci., 1845, vol. 49, p. 337). Analysed by J. L. Smith (*ibid.*, 1875, vol. 10, p. 349), Ni = 8.01% ($n = 11$). Described by E. Cohen (Meteoritenkunde, 1905, Heft 3, p. 320). Occluded gases analysed by A. W. Wright (Amer. Journ. Sci., 1876, vol. 11, p. 257).

Over 2½ kg. in Harvard University.

Specimens : [50808], 62 grams ; [20199], 15½ grams.

Charlotte, v. Monroe.

Charsonville, Meung, Loiret, France.

Fell 1810, Nov. 23, 1.30 p.m.

• Synonyms : Beaugency ; Bois de Fontaine ; Chartres ; La Touanne ; Meung sur Loire ; Orléans ; Touanne.

Stone. Veined grey chondrite.

Three stones fell, after detonations, but two only were found, one of 18 kg. and the other of 9 kg. (P. M. S. Bigot de Morogues, Ann. Phys. (Gilbert), 1811, vol. 37, p. 349 ; L. N. Vauquelin, *ibid.*, 1812, vol. 40, p. 83). Bois de Fontaine (J. R. Gregory, Geol. Mag., 1886, vol. 3, p. 357) and Chartres (L. Fletcher, Mineral. Mag., 1889, vol. 8, p. 146) are identical with Charsonville.

2 kg. in Paris (Mus. d'Hist. Nat.).

Specimens : of Charsonville—[1920,294], 153 grams ; [46008], 37 grams ; [42516], 36½ grams ; [90257], 3 grams : of Bois de Fontaine—[56542], 1163 grams ; [53598], 85½ grams ; [52151], 1½ gram : of Chartres—[63875], 20 grams.

Chartres, v. Charsonville.

Charwallas, Hissar district, Punjab, India.

Fell 1834, June 12, 8 a.m.

Synonym : Chaharwala.

Stone. Intermediate chondrite.

A stone of about 26½ lb. fell, after detonations (— Parsons, Journ. Asiatic Soc. Bengal, 1834, vol. 3, p. 413, where the date of fall is given doubtfully as June 8, whereas in Catalogues of the Indian Museum, Calcutta, it is given as June 12).

Only a few grams known in collections; 19 grams in Vienna (Naturhist. Mus.).

Specimens : [25461], 30½ grams; [34602], 7 grams.

Chassigny, Haute Marne, France.

Fell 1815, Oct. 3, 8 a.m.

Synonym : Langres.

Stone. Chassignite.

A stone (or perhaps several), the fragments of which weighed about 4 kg., fell, after detonations (— Pistollet, Ann. Phys. (Gilbert), 1818, vol. 58, p. 171). Analysed by A. A. Damour (Comptes Rendus Acad. Sci. Paris, 1862, vol. 55, p. 591), $m = 2$.

415 grams in Paris (Mus. d'Hist. Nat.).

Specimens : [19972], 34½ grams; [33991], 6 grams.

Château-Renard, Montargis, Loiret, France.

Fell 1841, June 12, 1.30 p.m.

Synonym : Triguères.

Stone. Veined intermediate hypersthene-chondrite.

A stone of about 30 kg. fell, after detonations and appearance of fire-ball (— Delavaux, Comptes Rendus Acad. Sci. Paris, 1841, vol. 12, p. 1190). Analysed by O. P. A. P. Dufrénoy (*ibid.*, 1841, vol. 13, p. 47). Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 354), $f = 8\frac{1}{2}$, $n = 6\frac{1}{2}$.

3½ kg. in Budapest (Hung. Nat. Mus.), 3½ kg. in Paris (Mus. d'Hist. Nat., and Ecole des Mines), 1 kg. in Tübingen University, 837 grams in Vienna (Naturhist. Mus.).

Specimens : [16355], 3234 grams, and fragments, 6 grams; [1920,295], 80 grams; [46971], 66 grams.

Chattooga County, v. Holland's Store.**Cherokee County, v. Canton; Losttown.****Cherokee Mills, v. Canton.****Cherson, v. Grossliebenthal; Savtschenskoje; Vavilovka.****Chervettaz, Palézieux, Vaud, Switzerland.**

Fell 1901, Nov. 30, 2 p.m.

Synonyms : Châtillens; Palézieux.

Stone. Crystalline spherical chondrite.

After appearance of luminous meteor and detonations, a stone of about ½ kg. fell and was found in the forest of Chervettaz: described by M. Lugeon with note by E. Cohen (Bull. Soc. Sci. Nat. Vaud, 1904, vol. 40, p. 1, maps and figs.).

Main mass in Lausanne (Mus. Géol.).

Specimen : [86761]; 29 grams.

Chester County, v. Chesterville.

Chesterville, Chester County, South Carolina, U.S.A.

Found before 1849.

Synonym : Chester County.

Iron. Nickel-poor ataxite.

A mass of 16½ kg. was ploughed up a few years before 1849 (C. U. Shepard, Amer. Journ. Sci., 1849, vol. 7, p. 449). Described by E. Cohen with analysis by O. Sjöström (Meteoritenkunde, 1905, Heft 3, p. 62), Ni = 5.50% ($n = 17$).

Specimens : [24001], the largest piece preserved, 2065 grams;
[90224], 132 grams.

***Chichimeguillas, Zacatecas, Mexico.**

Found 1901.

Iron.

A mass of 6 kg. was found in the Hacienda de Chichimeguillas (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 7).

Main mass in Mexico City (Mus. Inst. Geol.).

***Chico Mountains, Brewster County, Texas, U.S.A.**

Known 1915.

Synonym : Alpine.

Iron. Nickel-poor ataxite.

Original weight said to have been about 2 tons : described by G. P. Merrill and analysed by J. E. Whitfield (Proc. U.S. Nat. Mus. Washington, 1922, vol. 61, Art. 4, p. 1, fig.), Ni = 5.62% ($n = 16\frac{1}{2}$).

212 grams in Washington (U.S. Nat. Mus.).

*Chihuahua, v. Casas Grandes.**Chilcat, v. Chilkoot.**Chilcoot, v. Chilkoot.**Chile, v. Dehesa; Vaca Muerta.**Chilkat, v. Chilkoot.****Chilkoot Inlet, Portage Bay, Alaska.**

Known 1881.

Synonym : Chilcat.

Iron. Medium octahedrite.

A mass of 43 kg. was obtained in 1881 from Indians who said it had been seen to fall about 100 years ago (Ann. Rep. California State Mining Bureau, Sacramento, 1884, p. 262; and O. C. Farrington, Cat. Meteorites North America, Mem. Nat. Acad. Sci. Washington, 1915, vol. 13, p. 122).

Main mass in San Francisco (California State Mining Bureau).

*Chilpanzingo, v. Caparrosa.***Chinaulta, Guatemala, Central America.**

Found 1902.

Synonym : Guatemala.

Iron. Medium octahedrite.

A mass of 5.72 kg. was found : described and analysed by S. Meunier (Comptes Rendus Acad. Sci. Paris, 1902, vol. 134, p. 755), Ni = 9.05% ($n = 10$).

Specimens : Two slices, [1913,434], 189 grams; [1920,296],
83½ grams.

*Chireya, v. Butsura.**Cholula, v. Yanhuitlan.*

Christian County, v. Billings.

Chulafinnee, Cleburne County, Alabama, U.S.A.

Found 1873.

Synonym : Cleburne County.

Iron. Medium octahedrite.

A mass of about 35½ lb. was ploughed up (W. E. Hidden, *Amer. Journ. Sci.*, 1880, vol. 19, p. 370). Analysed by J. B. Mackintosh (*ibid.*, 1880, vol. 20, p. 74), Ni = 7.37% ($n = 12\frac{1}{2}$). Described by A. Brezina (*Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1882, vol. 84, p. 281).

Main mass in Vienna (Naturhist. Mus.), 1 kg. in Budapest (Hung. Nat. Mus.).

Specimen : [54276], 60 grams.

Chupaderos, Jimenez, Chihuahua, Mexico.

Known for centuries; first mentioned 1852.

Synonym : Huejuquilla, Jimenez.

Iron. Fine octahedrite.

Two large masses of 14,114 and 6767 kg. (about 14 and 6½ tons) respectively were found about 16 miles from Jimenez (formerly Huejuquilla) (A. Castillo, *Cat. Météorites Mexique*, Paris, 1889, p. 8; L. Fletcher *Mineral. Mag.*, 1890, vol. 9, p. 148; E. Cohen, *Meteoritenkunde*, 1905, Heft 3, p. 346). Analysed by E. Cohen and E. Weinschenk (*Ann. Naturhist. Hofmus. Wien*, 1891, vol. 6, p. 147), Ni = 8.76% ($n = 10$). The two masses were in 1891 removed to the School of Mines, City of Mexico.

Specimen : [85074], a slice, 1087 grams.

***Cincinnati**, Hamilton County, Ohio, U.S.A.

Found 1898.

Iron. Nickel-poor ataxite.

A piece of 28 grams in the Munich Institute was described by E. Cohen and analysed by O. Sjöström (*Meteoritenkunde*, 1905, Heft 3, p. 51), Ni = 5.43% ($n = 18$).

Cirencester, v. Aldsworth.

Claiborne, v. Lime Creek.

Claiborne County, v. Tazewell.

Clarac, v. Ausson.

Clarke County, v. Lime Creek.

Claywater Stone, v. Vernon County.

Cleburne County, v. Chulafinnee.

Cléguérec, v. Kernouvé.

Cleveland, Bradley County, Tennessee, U.S.A.

Found 1860.

Synonyms : Bradley County; East Tennessee; Lea Iron; Philadelphia Iron.

Iron. Medium octahedrite.

A mass of 254 lb. was found; described and analysed by F. A. Genth (*Proc. Acad. Nat. Sci. Philadelphia*, 1886, p. 366), Ni = 8.06% ($n = 11$).

Main mass in Philadelphia (Mus. Acad. Sci.), 1 kg. in Vienna (Naturhist. Mus.).

Specimen : [64205], a slice, 209 grams.

***Clohars, Fouesnant, Quimper, Finistère, France.**

Fell 1822, June 21.

Stone. Grey chondrite.

A fragment of 6 grams, with label of locality and date of fall, was acquired by the Museum of Natural History, Paris, in 1897 (S. Meunier, *Comptes Rendus Acad. Sci. Paris*, 1897, vol. 124, p. 1543).

*Klondike, v. Klondike.***Coahuila, Mexico.**

Known 1837.

Synonyms: Bolson de Mapimi; Bonanza Iron; Butcher Iron; Cerralvo; Couch Iron; Fort Duncan; Hacienda de Potosi; Lupton's Iron; Maverick County; Nuevo Leon; Potosi; Saltillo; Sancha (Sanchez) Estate; Santa Rosa; Smithsonian Iron (?).

Iron. Hexahedrite.

Fourteen masses (*Bonanza Iron*), some said to be of 2000 to 3000 lb., were seen by E. M. Hamilton about 1866 (C. U. Shepard, *Amer. Journ. Sci.*, 1866, vol. 42, p. 347, and 1867, vol. 43, p. 384). Eight pieces (*Butcher Iron*) varying in weight from 290 lb. to 654 lb. and totalling 4000 lb. were removed to the United States by H. B. Butcher in 1868 (J. L. Smith, *ibid.*, 1869, vol. 47, p. 383). Another mass of Butcher Iron of 192 lb. was seen by N. T. Lupton in 1879 at *Santa Rosa* (*ibid.*, 1885, vol. 29, p. 232). The *Sancha (Sanchez) Estate* mass of 252 lb. was found in use as an anvil at *Saltillo* by D. N. Couch in 1853 (J. L. Smith, *ibid.*, 1855, vol. 19, p. 160). A mass of 97 lb. was found at *Fort Duncan*, Maverick Co., Texas, in 1882, by C. C. Cusick (W. E. Hidden, *ibid.*, 1886, vol. 32, p. 304). The probable identity of all these masses was suggested by L. Fletcher (*Mineral. Mag.*, 1890, vol. 9, pp. 107-119). The *Butcher Iron* was analysed by J. L. Smith (*l.c.*, p. 385), Ni = 6.62% ($n = 14$); *Fort Duncan* by E. Cohen (*Neues Jahrb. Min.*, 1889, Bd. I, p. 227), Ni = 6.66% ($n = 14$); and *Saltillo* by O. Bürger (E. Cohen, *Meteoritenkunde*, 1905, Heft 3, p. 194), Ni = 4.79% ($n = 19$). An analysis of "Bolson de Mapimi" has more recently been made by J. E. Stead (*Journ. Iron and Steel Inst.*, 1915, vol. 91, p. 140), Ni = 5.05% ($n = 19$). The "Smithsonian Iron," a hexahedrite (?) of about 6 lb., from the Museum of the Smithsonian Institution, has been referred to Coahuila (E. Cohen, *Meteoritenkunde*, 1905, Heft 3, p. 190): it was analysed by C. U. Shepard, junr., in 1881 (C. U. Shepard, senr., *Amer. Journ. Sci.*, 1881, vol. 22, p. 119), Ni = 6.07% ($n = 15$).

Over 830 kg. of Butcher Iron in Harvard University; the main part of the 114 kg. mass of Sanchez Estate and of the Smithsonian Iron in Washington (U.S. Nat. Mus.).

Specimens: of Butcher—[49517], one of the original masses, 243,550 grams (about 550 lb.); [54242], 2590 grams; [53295], 711 grams; [53296], 68 grams; [43052], 9 grams: of Fort Duncan—[62849], 4520 grams: of "Sancha Estate"—[61921], 572 grams: of "Santa Rosa"—[35276], 9 grams; [34587], 7 grams; [90230], 6 grams: of "Bonanza"—[41031], 5 grams: of "Smithsonian Iron."—[54279], 5 grams.

Cobijsa, Pampa of Santa Barbara, Antofagasta, Chile.

Found 1892.

Synonym: Santiago de Chile.

Stone. Crystalline chondrite.

A mass of 3690 grams in the shape of a lengthened sphere was found (H. A. Ward, Proc. Rochester Acad. Sci., 1906, vol. 4, p. 229).

1½ kg. in Chicago (Field Mus. Nat. Hist.), about 1 kg. in Santiago de Chile (School of Mines).

Specimens: [1905,441], an end-piece, 295½ grams; [1907,133], a slice, 252 grams.

Cobija, v. Joel's Iron.

Cocke County, v. Cosby's Creek.

Colby, Clark County, Wisconsin, U.S.A.

Fell 1917, July 4, 6.20 p.m.

Stone. Veined intermediate chondrite.

After appearance of a luminous meteor with trail of black smoke, moving from N.W. to S.E., and detonations, two stones, of about 150 lb. and 80 lb. respectively, fell about ½ mile apart and were broken into pieces (letter of R. N. Buckstaff of Dec. 22, 1921, in Min. Dept., British Museum; H. L. Ward, Science, New York, 1917, vol. 46, p. 262).

Main masses in Milwaukee Museum.

Specimens: [1922,792], 1560 grams; [1922,9], a piece from the larger stone, 29½ grams.

***Cold Bay, Alaska.**

Found 1921.

Stony-iron. Pallasite.

A mass of the size of a man's two fists was found, but was broken up and most of it was lost: described by G. P. Merrill (Proc. U.S. Nat. Mus. Washington, 1922, vol. 61, p. 3).

320 grams in Washington (U.S. Nat. Mus.).

Cold Bokkeveld, Cape Province, South Africa.

Fell 1838, Oct. 13, 9 a.m.

Synonym: Bokkeveld.

Stone. Carbonaceous chondrite.

Many stones, the largest of about 4½ lb., fell after appearance of fire-ball and detonations (T. Maclear, Phil. Trans. Roy. Soc. London, 1839, vol. 129, p. 83, and 1840, vol. 130, p. 177). Analysed by E. P. Harris and F. Wöhler (Inaug.-Diss. Göttingen, 1859, p. 35; and Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1859, vol. 35, p. 5, and 1860, vol. 41, p. 565).

Over ¾ kg. in Paris (Mus. d'Hist. Nat.), ½ kg. in Vienna (Naturhist. Mus.).

Specimens: [13989], a complete stone, 706 grams; [1727], a complete stone, 268 grams; [19002], seventeen specimens including small complete stones, 82 grams; [82818], 21 grams; [33907], 2 grams.

Collax, Rutherford County, North Carolina, U.S.A.

Found 1880.

Synonym: Ellenboro.

Iron. Medium octahedrite.

A mass of about 5 lb. was ploughed up: described and analysed by L. G. Eakins (Amer. Journ. Sci., 1890, vol. 39, p. 395), Ni = 10.37% ($n = 9$).

About 900 grams in Chicago (Field Mus. Nat. Hist.).

Specimen: [84193], a slice, 52 grams.

Collescipoli, Terni, Umbria, Italy.

Fell 1890, Feb. 3, 1.30 p.m.

Synonyms : Antifona; Terni.

Stone. Spherical bronzite-chondrite.

After appearance of fire-ball followed by detonations, a stone of about 5 kg. fell (G. Terrenzi, Riv. Ital. Sci. Nat. Siena, 1890, Ann. 10, no. 3, p. 25). Analysed by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, p. 13), $f = 18\frac{1}{2}$ ($n = 11$).

294 grams in Vienna (Naturhist. Mus.).

Specimens : [1920,299], 230 grams ; [85834], 229 grams ; [65973], 105 grams.

Collin County, v. McKinney.**Colombia, v. Rasgata** (under Santa Rosa).**Colorado, v. Bear Creek** ; Russel Gulch.**Colorado** (of A. Brezina), v. Trenton.***Colorado River, La Paz, New Mexico, U.S.A.**

Known 1862.

Synonym : La Paz.

Iron.

A mass of meteoric iron found near "La Paz, New Mexico," by H. Ehrenberg was exhibited by J. W. Whitney (Proc. Californian Acad. Nat. Sci. San Francisco, 1863, vol. 3, p. 21).

11 grams in Yale University.

Commune des Ormes, v. Les Ormes.**Concepcion, v. Adargas** ; Nogoya.**Coney Fork, v. Carthage.*****Constantia, near Cape Town, South Africa.**

Fell 1906, Nov. 4 (?), 4.30 p.m.

Stone. White chondrite (?).

A stone of about 2 lb. fell through the iron roof of a house (letters of J. P. Maclear of Nov. 28, 1906, and of Miss M. Wilman of Nov. 14, 1907, in Min. Dept., British Museum).

***Constantinople, Turkey.**

Fell 1805, June.

Stone. Eucrite (?).

Several stones are said to have fallen on the shambles in Constantinople (E. F. F. Chladni, Feuer-Meteore, Wien, 1819, p. 278). The fragment of 6 grams acquired by the Vienna Museum in 1832 probably belongs to Stannern (G. Tschermak, Tschermaks Min. Mitt., 1872, p. 85; and P. Partsch, Meteoriten, Wien, 1843, p. 26).

Cookeville, Putman County, Tennessee, U.S.A.

Found about 1913.

Iron. Coarse octahedrite.

A mass of about 5 lb. was found : described by G. P. Merrill and analysed by J. E. Whitfield (Proc. U.S. Nat. Mus. Washington, 1916, vol. 51, p. 325), $Ni = 6.38\%$ ($n = 13$).

Main mass was in the possession of Ward's Nat. Sci. Est. Rochester, New York.

Specimen : [1920,116], a slice, 135 grams.

***Coon Butte**, Coconino County, Arizona, U.S.A.

Found 1905.

Stone. Brecciated grey chondrite.

A stone of $2\frac{3}{4}$ kg. was found about a mile west of Coon Butte: described and partially analysed by J. W. Mallet (*Amer. Journ. Sci.*, 1906, vol. 21, p. 347), $f = 8\frac{1}{2}$, $n = 8\frac{1}{2}$.

309 grams in Chicago (Field Mus. Nat. Hist.), 200 grams in Washington^c (U.S. Nat. Mus.).

Cooperstown, v. Burlington.**Coopertown**, Robertson County, Tennessee, U.S.A.

Known 1860.

Synonym: Robertson County.

Iron. Medium octahedrite.

A mass of 37 lb. was sent to J. L. Smith in 1860 and was analysed by him (*Amer. Journ. Sci.*, 1861, vol. 31, p. 266), Ni = 9.12% ($n = 10$).

2 kg. in Harvard University.

Specimens: [40879], 92 grams; [35407], $87\frac{1}{2}$ grams.

Copiapo, Atacama, Chile.

Found 1863.

Synonyms: Deesa; Dehesa; Desert of Atacama; Sierra de Deesa.

Iron. Brecciated octahedrite, with silicate inclusions.

Numerous masses were brought to Copiapo since 1863: some, owing to interchange of labels by G. A. Daubr  e, have been supposed to come from the Sierra de Deesa (L. Fletcher, *Mineral. Mag.*, 1889, vol. 8, p. 255). Described by W. von Haidinger (*Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1864, vol. 49, Abt. 2, p. 490), and by G. A. Daubr  e with analysis by I. Domeyko (*Comptes Rendus Acad. Sci. Paris*, 1868, vol. 66, p. 571), Ni = 8.7% ($n = 10$).

About 23 kg. are known in collections, and Daubr  e had a mass of 7 kg. Nearly 14 kg. in Paris (*Mus. d'Hist. Nat.*), 1 kg. in Vienna (*Naturhist. Mus.*).

Specimens: [45951], two pieces, 633 grams, and $118\frac{1}{2}$ grams; [41110], $12\frac{1}{2}$ grams; [40225], $2\frac{1}{2}$ grams.

***Corrizatillo**, Copiapo, Atacama, Chile.

Known 1884.

Iron.

A mass of 1328 grams was sent from Chile by L. Sundt to the Christiania University. It was provisionally referred to Copiapo by E. A. W  lfing (*Die Meteoriten in Sammlungen*, T  bingen, 1897, p. 87).

Corston, v. Strathmore.**Cosby's Creek**, Cocke County, Tennessee, U.S.A.

Known before 1837.

Synonyms: Cocke County; East Tennessee; Sevier County; Wilson County.

Iron. Coarse octahedrite.

Two masses, one said to have weighed 2000 lb. and the other 112 lb., were known before 1837 (G. Troost, *Amer. Journ. Sci.*, 1840, vol. 38 p. 250; C. U. Shepard, *ibid.*, 1842, vol. 43, p. 354, and 1847, vol. 4, p. 83).

Analysed by J. Fahrenhorst (E. Cohen, Ann. Naturhist. Hofmus. Wien, 1900, vol. 15, p. 372), Ni = 6.91% ($n = 13$).

21½ kg. in Harvard University, 12½ kg. in Tübingen University.

Specimens: [16865-6], two of the largest masses preserved, 25,850 grams and 24,610 grams; [46976], 823 grams; [1920,298], 21½ grams; [33204], 18½ grams.

Cosina, Dolores Hidalgo, Guanajuato, Mexico.

Fell 1844, Jan., 11 a.m.

Synonyms: Cerro Cosina; Dolores Hidalgo; Loma de la Cosina. Stone. Crystalline chondrite.

A stone of about 1.2 kg. was seen to fall, after detonation and appearance of fire-ball (O. Buchner, Ann. Phys. (Poggendorff), 1866, vol. 129, p. 351; A. Castillo, Cat. Météorites Mexique, Paris, 1889, p. 12).

130 grams in Paris (Mus. d'Hist. Nat.), 57 grams in Vienna (Naturhist. Mus.).

Specimen: [40767], 42 grams.

Cosona, v. Siena.

Cossipore, v. Manbhoom.

Costal de Garraf, v. Garraf.

Costa Rica, v. Heredia.

Costilla Peak, Taos County, New Mexico. U.S.A.

Found 1881.

Iron. Medium octahedrite.

A mass of about 78 lb. was found: described by R. C. Hills and analysed by L. G. Eakins (Proc. Colorado Sci. Soc., 1895, vol. 5, p. 121), Ni = 7.71% ($n = 12$).

Main mass in Denver (Colorado Sci. Soc.), 9½ kg. in Chicago (Field Mus. Nat. Hist.), 1½ kg. in Vienna (Naturhist. Mus.).

Specimen: [77097], 1595 grams.

Couch Iron, v. Fort Duncan (under Coahuila).

Cowra, County Bathurst, New South Wales.

Found 1888.

Synonyms: Bathurst; Carcoar.

Iron. Finest octahedrite.

A mass of 12½ lb. was found at the top of Battery Mountain (G. W. Card, Rec. Geol. Surv. New South Wales, 1897, vol. 5, p. 51). Analysed by J. C. H. Mingaye (*ibid.*, 1904, vol. 7, p. 311), Ni = 13.23% ($n = 6½$), and described by E. Cohen with analysis by R. Knauer (Meteoritenkunde, 1905, Heft 3, p. 289), Ni = 13.51% ($n = 6½$).

Main mass in Sydney (Mining and Geol. Mus.).

Specimens: [68206], 102 grams; [68205], 90 grams; [68207], 70 grams; [68209], 29 grams.

Crab Orchard Mountains, Rockwood, Cumberland County, Tennessee, U.S.A.

Found 1887.

Synonyms: Cumberland County; Powder Mill Creek; Rockwood.

Stony-iron. Mesosiderite.

About 5 masses, of total weight about 107 lb., the largest weighing 85 lb., were found $8\frac{1}{2}$ miles west of Rockwood Furnace (E. E. Howell, *Science*, New York, 1887, vol. 10, p. 107). Described by G. F. Kunz (*Amer. Journ. Sci.*, 1887, vol. 34, p. 476), and partially analysed by J. E. Whitfield (*ibid.*, p. 387): nickel-iron and olivine analysed by G. T. Prior (*Mineral. Mag.*, 1918, vol. 18, p. 167), $f = 42$, $n = 13$, m of pyroxene = 2, m of olivine = 10.

Over 14 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [63547], a slice, 1122 grams, and pieces, 29 grams.

***Cranberry Plains**, Poplar Hill, Giles County, Virginia, U.S.A.

Found 1852.

Synonym: Poplar Hill.

Iron. Fine octahedrite.

Little or nothing is known of its history (E. Cohen, *Meteoritenkunde*, 1905, Heft 3, p. 346).

36 grams in Harvard University.

Cranbourne, near Melbourne, Victoria, Australia.

Found 1854.

Synonyms: Abel; Arltunga; Beaconsfield; Dandenong; Melbourne; Victoria; Western Port district; Yarra Yarra River.

Iron. Coarse octahedrite.

Two large masses, one of $3\frac{1}{2}$ tons and the other (*Abel* mass) of about $1\frac{1}{2}$ tons, were found nearly four miles apart (W. von Haidinger, *Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1861, vol. 43, Abt. 2, p. 583), and later a mass of about 75 kg. was found at Beaconsfield, six miles from Cranbourne, and another of 40 lb. at Arltunga. The mass of $1\frac{1}{2}$ tons said to have been found at *Dandenong* (W. von Haidinger, *ibid.*, 1861, vol. 44, Abt. 2, p. 31) is probably identical with the *Abel* mass. The large mass of $3\frac{1}{2}$ tons was described and analysed by W. Flight (*Phil. Trans. Roy. Soc. London*, 1882, vol. 173, p. 885), $Ni = 7.74\%$ ($n = 12$). The Beaconsfield mass was described by E. Cohen, with analysis by O. Sjöström (*Sitzungsber. Akad. Wiss. Berlin*, 1897, vol. 46, p. 1035), $Ni = 7.34\%$ ($n = 12\frac{1}{2}$). A full description of Cranbourne is given by R. H. Walcott (*Mem. Nat. Mus. Melbourne*, 1915, no. 6). Fragments found in *Abel's* Collection of Minerals with the label "Yarra Yarra River—Date 1858," probably came from one of the Cranbourne masses.

The *Abel* mass in Melbourne Museum.

Specimens: of Cranbourne—[55532], the largest mass, $3\frac{1}{2}$ tons (3500 kg.), and a piece, 3190 grams; [61307], two masses, 2910 grams and 710 grams; [92566], 21 grams: of "Yarra Yarra River"—[92569], 122 grams; [63884], 99 grams; [63880], $62\frac{1}{2}$ grams; [92568], 44 grams; [92567], 36 grams; [63883], 28 grams; [63882], 13 grams; [63881], $12\frac{1}{2}$ grams: of Beaconsfield—[1922,161], a slice, $73\frac{1}{2}$ grams.

Crawford County, v. Mincy.

Cremona, v. Alfianello.

Cronstad, Orange Free State, South Africa.

Fell 1877, Nov. 19, 4 p.m.

Synonym: Kroonstad.

Stone. Veined grey bronzite-chondrite.

After detonations a shower of stones fell, the largest of about 6 lb., but few were found: described and analysed by G. T. Prior (*Mineral. Mag.*, 1916, vol. 18, p. 10), $f = 18\frac{1}{2}$, $n = 11$, $m = 5$.

Two stones in the Bloemfontein Museum were described by W. A. D. Rudge (Trans. Roy. Soc. South Africa, 1912, vol. 2, p. 211).

Specimens: [55428], a nearly complete stone, 882 grams; [52149], 287½ grams.

Cross Roads, Boyett, Wilson County, North Carolina, U.S.A.

Fell 1892, May 24, 5 a.m.

Synonyms: Boyett; Wilson County.

Stone. Grey chondrite.

A stone of about 5 oz. (167 grams) was seen to fall, after detonations (E. E. Howell, Amer. Journ. Sci., 1893, vol. 46, p. 67).

157 grams in Howell's Collection in 1897.

Specimen: [73647], 11½ grams.

Cross Timbers, v. Red River.

Crow Creek, v. Silver Crown.

Crumlin, County Antrim, Ireland.

Fell 1902, Sept. 13, 10.30 a.m.

Stone. Grey hypersthene-chondrite.

A stone of 9 lb. 5½ oz. was seen to fall, after detonations (L. Fletcher, Nature, London, 1902, vol. 66, p. 577). Described by L. Fletcher and analysed by G. T. Prior (Mineral. Mag., 1921, vol. 19, p. 149), $f = 9$, $n = 7$, $m = 3½$.

Specimen: [86115], the nearly complete stone, 3821 grams, and pieces, 39 grams.

***Cuba**, West Indies.

Described 1871.

Iron. Medium octahedrite.

A mass of about 1½ kg. in the Madrid Museum was described and analysed by J. M. Solano y Eulate (Anal. Soc. Españ. Hist. Nat. Madrid, 1872, vol. 1, p. 183).

Cuernavaca, Morelos, Mexico.

Found 1889.

Synonym: Morelos.

Iron. Fine octahedrite.

A mass of about 35 kg. was found on the road from Mexico City to Cuernavaca: described by H. A. Ward (Proc. Rochester Acad. Sci., 1902, vol. 4, p. 81), and by E. Cohen with analysis by O. Hildebrand (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 379), Ni = 8.76% ($n = 10$).

Main mass in Mexico City (Nat. Mus.).

Specimen: [86069], 1024 grams.

Cullison, Pratt County, Kansas, U.S.A.

Found 1911.

Stone. Spherical bronzite-chondrite.

A stone of about 10 kg. was found in 1911, but is said to have fallen Dec. 22, 1902: described by G. P. Merrill and analysed by J. E. Whitfield (Proc. U.S. Nat. Mus. Washington, 1913, vol. 44, p. 325), $f = 19$, $n = 10$, $m = 5$.

2½ kg. in Washington (U.S. Nat. Mus.).

Specimen: [1912,315], 2789 grams.

Cumberland County, v. Crab Orchard.

Cumberland Falls, Whitley County, Kentucky, U.S.A.

Fell 1919, April 9, noon.

Stone. Whitleyite, a breccia consisting of fragments of white aubrite and black enstatite-chondrite.

Several stones, the largest (which broke into fragments) estimated at 31 lb. in weight, fell, after appearance of fire-ball and detonations (A. M. Miller, *Science*, New York, 1919, vol. 49, p. 541). Described by G. P. Merrill and analysed by E. V. Shannon (*Proc. U.S. Nat. Mus. Washington*, 1920, vol. 57, p. 97), for the aubrite $f = 1$, $n = 15$, $m = 24$; for the dark chondrite $f = 13$, $n = 16$, $m = 13$.

Main masses in Washington (U.S. Nat. Mus.).

Specimens: [1920,106], 377 grams; [1920,107], 261 grams.

Currant Creek, v. Guffey.

Cusignano, v. Borgo San Donnino.

Cynthiana, Harrison County, Kentucky, U.S.A.

Fell 1877, Jan. 23, 4 p.m.

Synonyms: Harrison County; Robinson Station.

Stone. Grey hypersthene-chondrite.

After appearance of fire-ball and detonations, a stone of about 6 kg. fell nine miles from Cynthiana: described and analysed by J. L. Smith (*Amer. Journ. Sci.*, 1877, vol. 14, p. 224). Amount and composition of nickel-iron determined by G. T. Prior (*Mineral. Mag.*, 1919, vol. 18, p. 353), $f = 6$, $n = 6$.

4 kg. in Harvard University.

Specimen: [53288], 140 grams.

Czartorya, v. Zaborzika.

Dacca, v. Shytal.

Dacotah, v. Ponca Creek.

Dakhin Paiksha, v. Dokachi.

Dakota, v. Ponca Creek.

Dalton, Whitfield County, Georgia, U.S.A.

Found 1877.

Synonym: Whitfield County.

Iron. Medium octahedrite.

A mass of 13 lb. was found in 1877 on a farm 20 miles N.E. of Dalton, *Whitfield County* (W. E. Hidden, *Amer. Journ. Sci.*, 1881, vol. 21, p. 286, fig.). In 1879 another mass of 117 lb. was ploughed up 14 miles N.E. of Dalton (C. U. Shepard, *ibid.*, 1883, vol. 26, p. 336), the identity of which with the 13 lb. Whitfield County mass has been considered doubtful (G. P. Merrill, *Proc. U.S. Nat. Mus. Washington*, 1916, vol. 51, p. 447). The 117 lb. mass (Dalton) has been analysed by J. E. Whitfield (G. P. Merrill, *l.c.*), Ni = 7.57% ($n = 12$).

The main part of the 117 lb. mass of Dalton in Washington (U.S. Nat. Mus.).

Specimens: [53291], Whitfield County, 145½ grams; [61995],

Dalton, 142½ grams.

Dandapur, Gorakhpur district, United Provinces, India.

Fell 1878, Sept. 5, 5 p.m.

Synonym : Goruckpur.

Stone. Veined intermediate hypersthene-chondrite.

Two stones, of about $6\frac{1}{2}$ lb. and 5 lb. 14 oz. respectively, fell 300 paces apart, after appearance of moving wedge-shaped cloud and detonations (H. Fraser, Proc. Asiatic Soc. Bengal, 1878, p. 175).

2 kg. of the larger stone in Calcutta (Mus. Geol. Surv. India).

Specimen : [53321], two pieces, 2370 and 215 grams respectively, constituting the main mass of the smaller of the two stones.

Dandenong, v. Cranbourne.

Daniel's Kuil, Griqualand West, South Africa.

Fell 1868, March 20.

Synonym : Griqualand.

Stone. Crystalline enstatite-chondrite.

A stone of 2 lb. 5 oz. was seen to fall by a native (J. R. Gregory, Geol. Mag., 1868, vol. 5, p. 531). Described and analysed by G. T. Prior (Mineral. Mag., 1916, vol. 18, p. 13), $f = 25\frac{1}{2}$, $n = 13$, $m = \infty$, contains oldhamite and daubréelite.

Specimens : Three pieces, viz. [42388], 222 grams; [42502], 121 grams; and [42503], 88 grams, fitting together and forming about half of the original stone: [42507], fragments, 28 grams.

Danville, Morgan County, Alabama, U.S.A.

Fell 1868, Nov. 27, 5 p.m.

Stone. Veined grey hypersthene-chondrite.

Several stones appear to have fallen after detonations, but only one, of about $4\frac{1}{2}$ lb., was recovered: described and analysed by J. L. Smith (Amer. Journ. Sci., 1870, vol. 49, p. 90).

105 grams in Harvard University.

Specimens : [47237], 22 grams; [43056], 5 grams.

Darmstadt, Hesse, Germany.

Fell before 1804.

Stone. Veined grey chondrite.

A stone of about 100 grams fell, after detonations (G. A. Suckow, Mineralogie, Leipzig, 1804, vol. 2, p. 649).

64 grams in Heidelberg University.

Specimen : [35277], $1\frac{1}{2}$ grams.

Davidson County, v. Drake Creek.

Davis Mountains, Jeff Davis County, Texas, U.S.A.

Found 1903.

Synonym : Toyah.

Iron. Medium octahedrite.

A mass of 1520 lb. was found: described by O. C. Farrington, and analysed by H. W. Nichols (Field Mus. Nat. Hist. Chicago, 1914, Publ. 178, Geol. Ser., vol. 5, no. 1, p. 4, figs.), Ni = 7.40% ($n = 12$).

Main mass in Chicago (Field Mus. Nat. Hist.).

Specimen : [1914,67], 41 grams.

Dawson, v. Klondike.

* E . . .

Deal, Long Branch, Monmouth County, New Jersey, U.S.A.

Fell 1829, Aug. 15, 12.30 a.m.

*Synonyms : Monmouth County; New Jersey.

Stone. Intermediate chondrite.

Several stones appear to have fallen after appearance of fire-ball and detonations, but only one, about 3 in. in length, was found, on a farm five miles S.W. of Long Branch (R. Vaux and T. McEuen, *Journ. Acad. Nat. Sci. Philadelphia*, 1829, vol. 6, p. 181).

5 grams in Paris (Mus. d'Hist. Nat.), 4 grams in Washington (U.S. Nat. Mus.).

Specimen : [34597], fragments, less than a gram.

Debreczen, v. Kaba.

De Calb County for DeKalb County, v. Smithville.

Decatur County, v. Prairie Dog Creek.

***De Cewsville, Haldimand County, Ontario, Canada.**

Fell 1887, Jan. 21, 2 p.m.

Synonym : Talbot Road.

Stone. White chondrite.

A stone of 340 grams was seen to fall in Talbot Road in the village of De Cewsville (E. E. Howell, *Proc. Rochester Acad. Sci.*, 1890, vol. 1, p. 92).

The complete stone in Vienna (Nat. Hist. Mus.).

Deep Springs, Rockingham County, North Carolina, U.S.A.

Found (said to have fallen) 1846.

Synonym : Rockingham County.

Iron. Nickel-rich ataxite.

A mass of $11\frac{1}{2}$ kg., found at Deep Springs farm, was said by a negro to have been seen to fall (F. P. Venable, *Amer. Journ. Sci.*, 1890, vol. 40, p. 161). Described by E. Cohen and analysed by J. Fahrenhorst (E. Cohen, *Meteoritenkunde*, 1905, Heft 3, p. 112), Ni = 13.44% ($n = 6\frac{1}{2}$).

Main mass in State Museum, Raleigh, North Carolina.

Specimen : [84437], a slice, 170 grams.

Deesa } (of G. A. Daubrée), v. Copiapo.
Dehesa }

Dehesa (Cordillera de la), Atacama, Chile.

Found before 1868.

Synonyms : Atacama; Chile; Sierra de Deesa.

Iron. Finest octahedrite.

Original weight unknown, for the 7 kg. mass mentioned by I. Domeyko as sent by Signor Lúdere appears to have been of Copiapo. A specimen of about 280 grams, obtained from Domeyko, was wrongly described by Daubrée, owing to an interchange of labels, as having been found in an unspecified locality in Chile (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1868, vol. 66, p. 572). The true locality is given by I. Domeyko (*Mineralojia*, 3rd Edit., 1879, p. 134), as shown by L. Fletcher (*Mineral. Mag.*, 1889, vol. 8, p. 256). Described by E. Cohen (*Meteoritenkunde*, 1905, Heft 3, p. 116). Analysed by E. Dittler (F. Berwerth, *Tschermaks Min. Petr. Mitt.*, 1917, vol. 34, p. 272), Ni = 11.97% ($n = 7$).

282 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [56473], 2 grams.

DeKalb County, v. Smithville.

Delegate, County Wellesley, New South Wales.

Found about 1904.

Iron. Medium to coarse octahedrite.

A mass of 61 lb. of boomerang shape was found on the S.E. side of Sawpit Creek: described and analysed by J. C. H. Mingaye (Rec. Geol. Surv. New South Wales, 1916, vol. 9, p. 158), Ni = 9.25% ($n = 10$).

Main mass in Sydney (Mining and Geol. Mus.).

Specimen: [1915,145], a slice, 186 grams.

***Delhi, Punjab, India.**

Fell 1897, Oct. 18.

Stone. White chondrite.

After appearance of a brilliant meteor, and detonations, two stones each of about 1 lb. fell 5 miles from Delhi, but only a fragment of 0.8 gram was secured (L. L. Fermor, Rec. Geol. Surv. India, 1907, vol. 35, pt. 2, p. 90).

The fragment in Calcutta (Mus. Geol. Surv. India).

***Dellys, Algeria.**

Known before 1865.

Iron. Medium octahedrite.

A piece of 76 grams was acquired by the Mus. d'Hist. Nat. Paris, and was described by G. A. Daubrée (Comptes Rendus Acad. Sci. Paris, 1866, vol. 62, p. 78).

Deniliquin, v. Barratta.**Denton County, Texas, U.S.A.**

Known since 1856.

Synonym: Austin.

Iron. Medium octahedrite.

The original mass was said to have been of about 40 lb., but only about 12 lb. was found by G. G. Shumard in the possession of a blacksmith at McKinney, Collin County, in 1860 (B. F. Shumard, Trans. St. Louis Acad. Sci., 1860, vol. 1, p. 623). Analysed by A. Madelung (Inaug.-Diss. Göttingen, 1862, p. 40), Ni = 7.53% ($n = 12$).

Main mass said to be in State Museum, Austin, Texas.

Specimen: [35412], 122 grams.

Denver, v. Bear Creek.**Deretschin, v. Ruschany.****Descubridora, Catorce, San Luis Potosi, Mexico.**

Found between 1780 and 1783.

Synonyms: Agua Blanca; Catorce; Poblazon; San Luis Potosi; Venagas.

Iron. Medium octahedrite.

A mass of 576 kg. was found between 1780 and 1783 (H. J. Burkart, Neues Jahrb. Min., 1874, p. 22), and was analysed by P. Murphy (*l.c.*, p. 26), Ni = 8.05% ($n = 11$). In 1885 another mass of 41½ kg. was found near Catorce (G. F. Kunz, Amer. Journ. Sci., 1887, vol. 33, p. 233), and was analysed by J. B. Mackintosh (*l.c.*, p. 235), Ni = 9.07% ($n = 10$). Possibly identical with Charcas (L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 157).

The main part of the large mass in Mexico City (National Mus.), 33 kg. in Chicago (Field Mus. Nat. Hist.), the 41 kg. mass in Vienna (Naturhist. Mus.).

Specimens: [85075], 4445 grams; [64203], 28 grams.

De Sotoville, v. Tombigbee River.

Dharmsala, v. Dhurmsala.

***Dharwar, Bombay, India.**

Fell 1848, Feb. 15, 1 p.m.

Stone. Intermediate chondrite (?).

A stone of 4 lb. fell near the village Negloor, and was sent to the Bombay Geogr. Soc. (H. Giraud, Edinburgh New Phil. Journ., 1849, vol. 47, p. 54).

Dhenagur, v. Kheragur.

Dhulia, v. Bhagur.

Dhurmsala, Kangra district, Punjab, India.

Fell 1860, July 14, 2.15 p.m.

Synonym : Dharmsala.

Stone. Intermediate hypersthene-chondrite.

Several stones, the largest estimated at about 329 lb., fell, after detonations and appearance of fire-ball (Journ. Asiatic Soc. Bengal, 1860 (1861), vol. 29, p. 410). Analysed by S. Haughton (Phil. Mag., 1866, vol. 32, p. 266). Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 353), $f = 3\frac{1}{2}$, $n = 3\frac{1}{2}$.

3.8 kg. in Turin University, $1\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.), 1.3 kg. in Calcutta (Mus. Geol. Surv. India).

Specimens : [33762], 8559 grams, and fragments, 5 grams; [33763], 3835 grams.

Diamantina, v. Thunda.

Dickson County, v. Charlotte.

Dinagepur for *Dinaipur, v. Pirgunje.*

Djati-Pengilon, Ngawi district, Java.

Fell 1884, March 19, 4.30 a.m.

Synonym : Alastoeva.

Stone. Crystalline bronzite-chondrite.

A stone of about 166 kg. fell, after detonation and appearance of fire-ball (R. D. M. Verbeek, Jaarb. Mijnwezen Nederlandisch Oost-Indie, 1886, vol. 15, p. 145). Analysed by J. W. Retgers (*l.c.*, p. 159).

Main mass in Batavia Museum.

Specimen : [63052], 469 grams.

Doab, v. Futtehpur; Kadonah.

Dokachi, Dacca district, Bengal, India.

Fell 1903, Oct. 22, 7 p.m.

Synonyms : Bibandi; Dakhin Paiksha; Hariya; Kolapara; Paiksha; Rana.

Stone. Spherical chondrite.

After appearance of fire-ball and detonations, a shower of over a hundred stones fell in several villages; twenty-four stones were recorded, the largest weighing 1571 grams and the total weight being about 3838 grams (L. L. Fermor, Rec. Geol. Surv. India, 1907, vol. 35, p. 68). Described by H. L. Bowman and analysed by H. E. Clarke (Mineral. Mag., 1911, vol. 16, p. 35).

Over 2 kg., including the largest stone, in Calcutta (Mus. Geol. Surv. India); $\frac{3}{4}$ kg., including 6 complete stones, in Oxford University.

Specimens : [1906,134], a complete stone, Dokachi (240 A. 2 of Fermor's report), 593½ grams; [1906,135], Dakhin Paiksha (240 C. 4 of Fermor's report), 28½ grams.

Dolgaja, v. Dolgovoli.

Dolgovoli, Luck, Wolyn, Poland.

Fell 1864, June 26, 7 a.m.

Synonym : Dolgaja.

Stone. White chondrite.

A stone of about 1.6 kg. fell, after detonations (O. Buchner, Ann. Phys. (Poggendorff), 1865, vol. 124, p. 591).

¾ kg. in Kiev University.

Specimen : [43197], 3 grams.

Dolores Hidalgo, v. Cosina.

Doña Inez, v. Vaca Muerta.

Donga Kohrod, Bilaspur district, Central Provinces, India.

Fell 1899, Sept. 23, 3 p.m.

Stone. Intermediate chondrite.

A small stone of about ½ lb. fell (letter of Director, Geol. Surv. India, of Oct. 2, 1901, in Min. Dept., British Museum; Cat. Meteorites, Calcutta Museum, 1901, p. 4).

90 grams in Calcutta (Min. Geol. Surv. India).

Specimen : [85671], 39½ grams; and cast of the small stone which must have weighed about ½ lb.

Dooralla, v. Durala.

Doornport, v. Winburg.

Dores dos Campos Formosos, v. Uberaba.

Doroninsk, Irkutsk, Siberia.

Fell 1805, April 6, 5 p.m.

Synonym : Irkutsk.

Stone. Brecciated grey chondrite.

Two stones of about 3½ kg. and 1 kg. respectively, fell, after appearance of cloud and detonations (A. Stoikovitz, Ann. Phys. (Gilbert), 1809, vol. 31, p. 308).

In 1897, 215 grams in Tübingen University, 176 grams in Moscow.

Specimens : [33971], 5½ grams; [56470], 3½ grams.

Drake Creek, Nashville, Sumner County, Tennessee, U.S.A.

Fell 1827, May 9, 4 p.m.

Synonyms : Davidson County; Nashville; Sumner County.

Stone. Veined white hypersthene-chondrite.

Five stones, the largest of 11½ lb., were seen to fall, after appearance of cloud and detonations (B. Silliman, Amer. Journ. Sci., 1830, vol. 18, p. 378). Analysed by E. H. von Baumhauer (Ann. Phys. (Poggendorff), 1845, vol. 66, p. 498), $f = 11½$, $n = 6½$, $m = 3½$.

1½ kg. in Harvard University, 2½ kg. in Leiden

Specimens : [20200], 2 fragments, 9½ grams; [14697], 8 grams; [90265], ½ gram.

Duel Hill (1854), Walnut Mts., Madison County, North Carolina, U.S.A.

Found 1854.

Synonyms: Asheville; Jewell Hill; Madison County.

Iron. Fine octahedrite.

Two masses of about 40 lb. and 8 lb were found in 1856 and 1854 respectively (F. P. Venable, List of Meteorites of North Carolina, Journ. Elisha Mitchell Sci. Soc., 1890, vol. 7, p. 44; and J. L. Smith, Amer. Journ. Sci., 1860, vol. 30, p. 240). Analysed by O. Bürger (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 354), Ni = 9.80% ($n = 9$).

Specimens: [40877], 87 grams; [32049], 43 grams.

Duel Hill (1873), Walnut Mts., Madison County, North Carolina, U.S.A.

Found 1873.

Synonyms: Jewell Hill; Madison County.

Iron. Coarse octahedrite.

A mass of about 25 lb. was found on a hill-side (F. P. Venable, *l.c.* above, p. 45; and B. S. Burton, Amer. Journ. Sci., 1876, vol. 12, p. 439). Analysed by B. S. Burton (*l.c.*, p. 439), Ni = 5.17% ($n = 18$).

Over 1 kg. in Vienna (Naturhist. Mus.).

Specimen: [55123], 12 grams.

Dundrum, County Tipperary, Ireland.

Fell 1865, Aug. 12, 7 p.m.

Synonym: Tipperary.

Stone. Crystalline bronzite-chondrite.

A stone of 4 lb. $\frac{1}{4}$ oz. was seen to fall, after detonation: described and analysed by S. Haughton (Proc. Roy. Irish Acad., 1867, vol. 9, p. 336), $f = 20$, $n = 18$, $m = 5$.

Main mass in Trinity College, Dublin.

Specimen: [67745], 245 grams.

Durala, N.W. of Karnal district, Punjab, India.

Fell 1815, Feb. 18, noon.

Synonym: Dooralla.

Stone. Veined intermediate hypersthene-chondrite.

A stone of about 29 lb. fell, after detonations (C. Bird, Phil. Mag., 1820, vol. 56, p. 156).

Specimen: [32097], the main mass of the stone, 12,000 grams, and pieces, 95 grams.

Durango, v. Humboldt Iron (under Morito).**Durango** (of P. Partsch), v. Rancho de la Pila.**Duruma, Mombasa, Wanikaland, East Africa.**

Fell 1853, March 6.

Synonym: Turuma.

Stone. Veined intermediate chondrite.

A stone of 577 grams was seen to fall, after detonations (R. P. Greg, Phil. Mag., 1862, vol. 24, p. 538; O. Buchner, Die Meteoriten in Sammlungen, Leipzig, 1863, p. 85).

507 grams in Munich Museum.

Specimens: [35730], less than $\frac{1}{2}$ gram; [83672], a thin section.

Dyalpur, Sultanpur district, United Provinces, India.

Fell 1872, May 8.

Synonym : Sultanpur.

Stone. Ureilite.

A stone of about 10 oz. fell (F. Fedden, Cat. Meteorites, Indian Museum, Calcutta, 1880, p. 17).

Specimen : [51185], the nearly complete stone, 269½ grams.

Eagle Station, Carroll County, Kentucky, U.S.A.

Found 1880.

Synonym : Carroll County.

Stony-iron. Pallasite.

A mass of about 80 lb. was found about ¾ mile from Eagle Station (G. F. Kunz, Amer. Journ. Sci., 1887, vol. 33, p. 228). Analysed by J. B. Mackintosh (*l.c.*, p. 232), and by G. T. Prior (Mineral. Mag., 1918, vol. 18, p. 178), $n = 6$, $m = 4$.

Over 18 kg. in Vienna (Naturhist. Mus.).

Specimen : [64407], a slice, 701½ grams.

Easter Essendy, v. Strathmore.*East Tennessee*, v. Cleveland; Cosby's Creek; Jonesboro; Morristown; Tazewell.*Eau Claire*, v. Hammond.*Echigo*, v. Yonōzu.*Echo*, v. Salt Lake City.*Eddy County*, v. Sacramento Mountains.*Eggenfelden*, v. Mässing.*Egyptian Meteorite*, v. Sinai.*Eibenstock*, v. Steinbach.**Eichstädt**, Middle Franconia, Bavaria.

Fell 1785, Feb. 19, 12.15 p.m.

Synonym : Wittmess.

Stone. Spherical bronzite-chondrite.

A stone of about 3 kg. was seen to fall, after detonations, in the district of Wittmess, 5 miles from Eichstädt (J. Pickel, von Moll's Ann. Berg- u. Hüttenk., Salzburg, 1805, vol. 3, p. 251). Described by C. W. Gumbel and analysed by A. Schwager (Sitzungsber. Akad. Wiss. München, Math.-phys. CL, 1878, vol. 8, p. 25).

521 grams in Munich Museum, 293 grams in Zürich University.

Specimens : [84188], 33 grams; [54639], 14 grams; [83671], thin-section.

Eifel, v. Bitburg.*Ekaterinoslav*, v. Augustinovka; Bachmut; Pavlograd; Verkhne Dnieprovsk.***Ekh Khara**, Bisauli tahsil, Budaun district, Rohilkhand, India.

Stone.

Mentioned by J. Coggin Brown (Cat. Meteorites Coll. Geol. Surv. India, Calcutta, 1916, p. 284.).

Elbogen, Bohemia.

Fell 1400 (?), recognised 1811.

Synonyms : "Burggraf;" Loket.

Iron. Medium octahedrite.

A mass of about 107 kg. was preserved for centuries at the Rathhaus of Elbogen and was known as "the bewitched burgrave": mentioned in 1785 (— Schaller, *Topographie Böhmen*, 1785, vol. 2, p. 6): recognised as meteoric by K. A. Neumann in 1811 (*Ann. Phys. (Gilbert)*, 1812, vol. 42, p. 197). Analysed by J. J. Berzelius (*Ann. Phys. (Poggendorff)*, 1834, vol. 33, p. 135), Ni = 8.52% ($n = 10$).

79 kg. in Vienna (*Naturhist. Mus.*), 14 kg. in Elbogen (Rathhaus), 6 kg. in Prague (*German Univ.*).

Specimens : [90219], 57½ grams; [33201], 37 grams; [1922,162], 16.5 grams.

El Capitan Range, Lincoln County, New Mexico, U.S.A.

Found 1893.

Synonym : Capitan Range.

Iron. Medium octahedrite.

A mass of 61 lb. was found in 1893, and may have fallen in July 1882, as a fire-ball was then seen to fall behind the El Capitan Range: described by E. E. Howell and analysed by H. N. Stokes (*Amer. Journ. Sci.*, 1895, vol. 50, p. 253), Ni = 8.40% ($n = 11$).

Main mass in 1895 in the Howell Collection; 2½ kg. in Chicago (*Field Mus. Nat. Hist.*).

Specimen : [80683], a slice, 956 grams.

El Chañaralino, v. Merceditas.**Eldorado County, v. Shingle Springs.****Elguerras, v. Cangas de Onis.****Eli Elwah, Hay, County Waradgery, New South Wales.**

Found 1888.

Synonym : Hay.

Stone. White hypersthene-chondrite.

A stone of about 33½ lb. was found 15 miles west of Hay (H. C. Russell, *Journ. and Proc. Roy. Soc. New South Wales*, 1888 (1889), vol. 22, p. 341). Analysed by A. Liversidge (*ibid.*, 1903, vol. 36, p. 356). Amount and composition of nickel-iron determined by G. T. Prior (*Mineral. Mag.*, 1919, vol. 18, p. 353), $f = 6\frac{1}{2}$, $n = 7\frac{1}{2}$.

Specimens : [1908,284], the main mass of the stone, 13,275 grams, and 11 pieces, 774 grams.

El Inca, v. Tamarugal.**Elisabethpol, v. Indarch; Mighei.****Ellenboro, v. Colfax.****Elm Creek, Admire, Lyon County, Kansas, U.S.A.**

Found 1906.

Stone. Spherical hypersthene-chondrite.

A mass of 7 kg. was ploughed up 3 miles N.N.E. of Admire (K. S. Howard, *Amer. Journ. Sci.*, 1907, vol. 23, p. 379). Described by G. P. Merrill and

analysed by J. E. Whitfield (Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 15), $f = 7$, $n = 8$.

1 kg. in Washington (U.S. Nat. Mus.), $\frac{3}{4}$ kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [1907,444], 912 grams.

Elmo, v. Joe Wright Mountain.

El Morito, v. Morito.

El Nakhla el Baharia, v. Nakhla.

***El Perdido**, between Irene and Dorrego, Bahia Blanca, Argentina.

Found 1905.

Synonym : Buenos Aires.

Stone. Crystalline chondrite.

A stone of about 30 $\frac{1}{2}$ kg. was ploughed up (M. Kantor, Cat. Col. Meteoritos, Rev. Mus. La Plata, 1920, vol. 25, p. 97; and Centralblatt Min., 1906, p. 736). Probably identical with Indio Rico.

Main mass (25 kg.) in La Plata Museum.

El Ranchito, v. Bacubirito.

Elsass, v. Ensisheim.

El Tule, v. Tule.

Emir (Mount), v. Krasnojarsk.

***Emmaville**, County Gough, New South Wales.

Found about 1900.

Stone.

A stone of 127 grams was found (C. Anderson, Rec. Australian Mus. Sydney, 1913, vol. 10, p. 58).

Emmet County, v. Estherville.

Emmetsburg, v. Emmitsburg.

Emmitsburg, Frederick County, Maryland, U.S.A.

Found 1854.

Synonyms : Emmetsburg; Frederick County.

Iron. Medium octahedrite.

A mass of about 1 lb. was found, and passed into the possession of Dr J. R. Chilton of New York, from whom S. C. H. Bailey obtained specimens (letter of Jan. 7, 1885, from S. C. H. Bailey, in Min. Dept., British Museum).

Specimen : [56158], obtained from S. C. H. Bailey, 6 $\frac{1}{2}$ grams.

Ensisheim, Alsace, France.

Fell, 1492, Nov. 16, 11.30 p.m.

Synonym : Elsass.

Stone. Crystalline hypersthene-chondrite.

A stone of about 127 kg. fell, after detonations, and was preserved for a long time in the parish church of Ensisheim (Ann. Phys. (Gilbert), 1804, vol. 18, p. 279; Ann. Phys. (Poggendorff), 1864, vol. 121, p. 333, and vol. 122, p. 182). Analysed by G. T. Prior (Mineral. Mag., 1921, vol. 19, p. 169), $f = 3$, $n = 3\frac{1}{2}$, $m = 2\frac{1}{2}$.

• 54 $\frac{1}{2}$ kg. in Ensisheim (Rathaus), 9 kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [90241], 441 grams; [1920,300], 10 grams.

Epinal, Vosges, France.

Fell 1822, Sept. 13, 7 a.m.

Synonym : La Baffe.

Stone. Spherical chondrite.

A stone of "about the size of a 6 lb. cannon-ball" was seen to fall, after detonations, during "a thunder storm," in the parish of La Baffe, 6 miles from Epinal (— Parisot, *Ann. Phys. (Gilbert)*, 1822, vol. 72, p. 323).

249 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [35780], $1\frac{1}{2}$ grams.**Ergheo, Brava, Italian Somaliland, East Africa.**

Fell 1889, July.

Stone. Crystalline hypersthene-chondrite.

A stone of about 20 kg. was seen to fall, but was left for five years lying in the ground : described by E. Artini and G. Melzi, and analysed by G. Boeris (*Esplorazione Commerciale*, Dec. 1898, Milan; *Neues Jahrb. Min.*, 1900, Bd. 1, ref., p. 357), $f = 1$, $n = 3$, m of olivine = $2\frac{1}{2}$, m of pyroxene = 3.

Specimens : [85838], 917 $\frac{1}{2}$ grams; [1920,301], 115 grams.**Erxleben, Magdeburg, Prussia.**

Fell 1812, April 15, 4 p.m.

Synonym : Magdeburg.

Stone. Crystalline bronzite-chondrite.

A stone of about 2 $\frac{1}{2}$ kg. fell, after detonations, between Magdeburg and Helmstedt (J. F. L. Hausmann and G. U. A. Vieth, *Ann. Phys. (Gilbert)*, 1812, vol. 40, p. 450). Analysed by F. Stromeyer (*Ann. Phys. (Gilbert)*, 1812, vol. 42, p. 105), $f = 21$, $n = 12$.

297 grams in Göttingen University.

Specimen : [33733], 31 $\frac{1}{2}$ grams.**Eschigo, v. Yonōzu.****Esnandes, Charente-Inférieure, France.**

Fell 1837, August.

Synonym : La Rochelle.

Stone. Grey chondrite.

A stone of about 1 $\frac{1}{2}$ kg. fell (*L'Institut*, Paris, 1837, vol. 5, p. 334).Little preserved in collections; 42 grams in Vienna (*Naturhist. Mus.*).Specimen : [63983], 2 $\frac{1}{2}$ grams.***Espiritu Santo, Michoacan, Mexico.**

Found (?).

Iron. Fine octahedrite.

54 grams in Chicago (*Field Mus. Nat. Hist.*) (O. C. Farrington, *Cat. Coll. Meteorites*, *Field Mus. Nat. Hist. Chicago*, 1916, p. 259).

Essendy, v. Strathmore.**Estacado, Hale County, Texas, U.S.A.**

Found 1883.

Stone. Crystalline bronzite-chondrite.

A stone of 290 kg. was found in 1883, twelve miles south of Hale Center :

described by K. S. Howard and analysed by J. M. Davison (Amer. Journ. Sci., 1906, vol. 22, p. 55), $f = 16\frac{1}{2}$, $n = 9$, m of pyroxene = $4\frac{1}{2}$.

Over 118 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [1906,259], a large slice, 17,103 grams.

Estherville, Emmet County, Iowa, U.S.A.

Fell 1879, May 10, 5 p.m.

Synonyms : Emmet County; Iowa; Perry meteor.

Stony-iron. Mesosiderite.

Several large masses, of total weight of over 700 lb., the two largest weighing about 437 lb. and 151 lb. respectively, and hundreds of small fragments of nickel-iron, fell, after detonations and appearance of brilliant fire-ball (S. F. Peckham, Amer. Journ. Sci., 1879, vol. 18, p. 77; C. U. Shepard, *ibid.*, p. 186). Described and analysed by J. L. Smith (*ibid.*, 1880, vol. 19, p. 459), $n = 13$, m of olivine = 6, m of pyroxene = 2; also described by G. P. Merrill, with analyses of "peckhamite," etc., by J. E. Whitfield and E. V. Shannon (Proc. U.S. Nat. Mus. Washington, 1920, vol. 58, p. 363).

The 437 lb. mass divided between London, Paris, and Vienna Museums; the 150 lb. mass in Minneapolis.

Specimens : [53764], part of the largest mass, 116,120 grams (256 lb.), and pieces, 70 grams; [65575], 44 small fragments, 416 grams; [1918,3-19], 17 small fragments, 187 grams; [53786], $21\frac{1}{2}$ grams; [53787], 2 fragments of 7 and 3 grams.

Et Tlahi, v. Hedjaz.

***Eustis**, Lake County, Florida, U.S.A.

Found 1918.

Stone. Spherical chondrite.

A stone of 502 grams was ploughed up (G. P. Merrill, Amer. Journ. Sci., 1918, vol. 44, p. 64).

Faha, v. Limerick.

Fairfield County, v. Weston.

Fairweather, v. Bridgewater.

Farmington, Washington County, Kansas, U.S.A.

Fell 1890, June 25, 1 p.m.

Synonym : Washington.

Stone. Black hypersthene-chondrite.

After appearance of fire-ball and detonations, a stone of 188 lb. was seen to fall, and another of 9 lb. was found (F. H. Snow, Science, New York, 1890, vol. 16, p. 38; G. F. Kunz and E. Weinschenk with analysis by L. G. Eakins, Tschermaks Min. Petr. Mitt., 1891, vol. 12, p. 179, and Amer. Journ. Sci., 1892, vol. 43, p. 65), $f = 7\frac{1}{2}$, $n = 7$, $m = 3\frac{1}{2}$.

Over 29 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens : [66200], 737 grams; [67016], a slice, $60\frac{1}{2}$ grams.

Fatehpur, v. Futtehpur.

Favars, Laissac, Aveyron, France.

Fell 1844, Oct. 21, 6.45 a.m.

Synonym : Laissac.

Stone. Intermediate chondrite.

After detonations, a stone of $1\frac{1}{2}$ kg. was found (letter of A. Boisse, L'Institut, Paris, 1844, vol. 12, p. 399).

430 grams in Paris (Mus. d'Hist. Nat.).

Specimens : [56466], 5 grams ; [34598], 1 gram.

Fayette County, v. Bluff.

Fayetteville, v. Petersburg.

Fehrbellin, v. Linum.

***Feid Chair, La Calle, Constantine, Algeria.**

Fell 1875, Aug. 16, midday.

Synonym : La Calle.

Stone. Brecciated spherical chondrite.

A stone of 380 grams fell (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1877, vol. 84, p. 70).

25 grams in Paris (Mus. d'Hist. Nat.).

Fekete, v. Mezö-Madaras.

Felix, Perry County, Alabama, U.S.A.

Fell 1900, May 15, 11.30 a.m.

Stone. Spherical carbonaceous hypersthene-chondrite.

After appearance of fire-ball and detonations, a stone of about 7 lb. was found : described by G. P. Merrill and analysed by P. Fireman (Proc. U.S. Nat. Mus., Washington, 1901, vol. 24, p. 193). Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 353, $f = 1\frac{1}{2}$, $n = 8$).

Main mass in Washington (U.S. Nat. Mus.).

Specimen : [1949,89], 37 grams.

***Ferguson, Haywood County, North Carolina, U.S.A.**

Fell 1889, July 18.

Synonym : Haywood County.

Stone. Chondrite.

After detonations, a stone of about $\frac{1}{2}$ lb. fell : it was sent to G. F. Kunz and was lost in New York City (G. F. Kunz, Amer. Journ. Sci., 1890, vol. 40, p. 320).

Finmarken, Arctic Norway.

Found 1902.

Stony-iron. Pallasite.

A mass of about $77\frac{1}{2}$ kg. was found (E. Cohen, Mitt. Naturwiss. Ver. Neu-Vorpommern u. Rügen, Greifswald, 1903, Jahrg. 35, p. 1).

Specimen : [86755], a slice, 1306 grams.

Finsterhölzelries, v. Teplá.

Fisher, Polk County, Minnesota, U.S.A.

Fell 1894, April 9, 4 p.m.

Synonym : Polk County.

Stone. Veined intermediate hypersthene-chondrite.

In April detonations were heard and in June were found two stones, one of $9\frac{1}{4}$ lb. and a larger one which was broken up and mostly lost ; later in 1895 were found two other small pieces, and in 1898 another stone of about 3 lb. : described by G. P. Merrill and analysed by J. E. Whitfield (Proc. U.S. Nat. Mus., Washington, 1915, vol. 48, p. 503).

The 9½ lb. stone in Minnesota University, and the 3 lb. stone in Washington (U.S. Nat. Mus.).

Specimens : [81069], 372½ grams ; [81070], 226 grams.

Fish River, v. Great Fish River (under Bethany).

Fisterhölzelrics, v. Tepla.

Flows, v. Monroe.

Floyd County } v. Indian Valley.
Floyd Mountain }

Folersville, v. Staunton.

Fomatlan, v. Tomatlan.

Forest City, Winnebago County, Iowa, U.S.A.

Fell 1890, May 2, 5.15 p.m.

Synonyms : Kossuth County ; Iowa ; Leland ; Winnebago County.

Stone. Brecciated spherical bronzite-chondrite.

After appearance of brilliant fire-ball (moving from W. to E. and leaving a trail of smoke), and detonations, a shower of stones fell over an area of 2 miles by 1 mile : the shower comprised five large stones of 80, 66, 10, 5, and 4 lb. and over 500 small ones : the total weight preserved is about 122 kg. (J. Torrey and E. H. Barbour, *Amer. Journ. Sci.*, 1890, vol. 39, p. 521 ; and *Amer. Geologist*, 1891, vol. 8, p. 67 ; G. F. Kunz, *Amer. Journ. Sci.*, 1890, vol. 40, p. 318 ; H. A. Newton, *ibid.*, 1890, vol. 39, p. 522). Analysed by L. G. Eakins (G. F. Kunz, *l.c.*, p. 319), $f = 19$, $n = 15$, $m = 4\frac{1}{2}$.

The 80 lb. stone in New York (*Amer. Mus. Nat. Hist.*), the 66 lb. stone in Minneapolis.

Specimens : [66201], a large complete stone, 2265 grams ; [65972], six complete and one nearly complete stones, 291 grams.

***Forsbach**, Hoffnungsthal, Cologne, Rhenish Prussia.

Fell 1900, June 12, 2 p.m.

Stone. Intermediate chondrite.

A stone of over 240 grams was seen to fall (R. Brauns, *Verh. Naturhist. Ver. Preuss. Rheinlande u. Westfalens*, 1918, vol. 75, p. 129, 2 pls.).

Forsyth, Monroe County, Georgia, U.S.A.

Fell 1829, May 8, 3.30 p.m.

Synonym : Monroe County.

Stone. Veined white hypersthene-chondrite.

A stone of 36 lb. fell, after detonations (B. Silliman, *Amer. Journ. Sci.*, 1830, vol. 18, p. 388).

Repository of main mass unknown.

Specimens : [90266], 51 grams ; [33947], 21½ grams.

Forsyth, v. Mincy.

Forsyth County, North Carolina, U.S.A.

Found about 1891.

Iron. Nickel-poor ataxite.

A mass of about 50 lb. was ploughed up "about three years" before 1895 (E. A. de Schweinitz, *Amer. Journ. Sci.*, 1896, vol. 1, p. 208). De-

scribed by E. Cohen and analysed by O. Sjöström (Sitzungsber. Akad. Wiss. Berlin, 1897, p. 386), Ni = 5.55% ($n = 17$).
Repository of main mass unknown.

Specimens: Two slices, viz. [82774], 320 grams; [1920,302], 218 grams.

Fort Duncan, v. Coahuila.

Fort Pierre, Stanley County, South Dakota, U.S.A.

Found 1856.

Synonym: Nebraska.

Iron. Medium octahedrite.

A mass of 35 lb. was found about 20 miles N.W. of Fort Pierre, between Council Bluff and Fort Union (N. Holmes, Trans. St. Louis Acad. Sci., 1860, vol. 1, p. 711; C. U. Shepard, Amer. Journ. Sci., 1860, vol. 30, p. 204). Analysed by H. A. Prout (N. Holmes, *l.c.* p. 711), Ni = 7.18% ($n = 13$), and by A. Madelung (Inaug.-Diss. Göttingen, 1862, p. 39), Ni = 7.6% ($n = 12$).

A 10 lb. piece in St. Louis (Mus. Acad. Sci.).

Specimens: [77187], 1882 grams; [35415], 134 grams.

Franceville, El Paso County, Colorado, U.S.A.

Found 1890.

Iron. Medium octahedrite.

A mass of 41 lb. 6½ oz. was found: described by H. L. Preston and analysed by J. M. Davison (Proc. Rochester Acad. Sci., 1902, vol. 4, p. 75) Ni = 8.05% ($n = 11$).

Specimen: [86424], a slice, 772 grams.

Frankfort }
Franckfort } v. Frankfort.

Frankfort (stone), Franklin County, Alabama, U.S.A.

Fell 1868, Dec. 5, 3 p.m.

Synonym: Franklin County.

Stone. Howardite.

A stone of about 650 grams was seen to fall, after detonations, 4 miles south of Frankfort: described by G. J. Brush and analysed by him and W. G. Minter (Amer. Journ. Sci., 1869, vol. 48, p. 240), $m = 2\frac{1}{2}$.

255 grams in Yale University, 127 grams in Harvard University.

Specimens: [47238], 24½ grams; [43055], 7½ grams; [43685], ½ gram.

Frankfort (iron), Franklin County Kentucky, U.S.A.

Found 1866.

Synonym: Franklin County.

Iron. Medium octahedrite.

A mass of 24 lb. was found on a hill 8 miles S.W. of Frankfort (J. L. Smith, Amer. Journ. Sci., 1870, vol. 49, p. 331). Analysed by J. L. Smith (*l.c.*, p. 331), Ni = 8.53% ($n = 11$).

7½ kg. in Harvard University.

Specimen: [40888], 149½ grams; [40889], 66½ grams.

Franklin County, v. Frankfort.

Fraserburg, v. Jackalsfontein.

Frederick County, v. Emmitsburg.

Fukutomi, Kijima, Hizen, Japan.

Fell 1882, March 19, 1 p.m.

Synonym : Kijima.

Stone. Veined grey chondrite.

Two stones of about 7 kg. and 2½ kg. fell, after detonations (K Jimbō,

T. Wada's Beiträge Min. Japan, 1906, no. 2, p. 41).

Main masses of the two stones are in Tokyo (Imp. Mus.).

Specimens : [1905,71], 225½ grams ; [68212], 4½ grams.

*Fulton County, v. Rochester.**Fürstenberg, v. Menow.***Futtehpur, Allahabad district, United Provinces, India.**

Fell 1822, Nov. 30, 6 p.m.

Synonyms : Allahabad ; Bithur ; Doab ; Fatchpur ; Shahpur.

Stone. Veined white chondrite.

After appearance of fire-ball and detonations, several stones, weighing from 1 to 4 lb. each, fell at Futtehpur and Bithur, about 70 miles N.W. of Allahabad (— Tytler, Edinburgh Journ. Sci., 1828, vol. 8, p. 171 ; Journ. Asiatic Soc. Bengal, 1859, vol. 28, p. 259).

926 grams in Calcutta (Mus. Geol. Surv. India), about ½ kg. in Vienna (Naturhist. Mus.).

Specimens : [34800], 798 grams ; [33757], 488½ grams ; [34805],

Bithur, 136 grams.

***Galapian, Agen, Lot et Garonne, France.**

Fell 1826, August (?).

Synonym : Agen.

Stone. Veined white chondrite.

A large stone is said to have fallen in the month of August, 1826 (B. de Ferussac, Bull. Sci. Natur. Paris, 1827, vol. 11, p. 420). A piece of 45 grams, said to have fallen on May 19, 1826 (the same date as Pavlograd), is in Paris (Mus. d'Hist. Nat.) (Cat. Coll. Météorites Mus. d'Hist. Nat. Paris, 1909, p. 30).

*Galapian, v. Agen (in part).****Galleguillos, Copiapo, Atacama, Chile.**

Known 1884.

.. Iron.

A mass of 1330 grams was sent from Chile by L. Sundt to the Christiania University. It was provisionally referred to Copiapo by E. A. Wülfing (Die Meteoriten in Sammlungen, Tübingen, 1897, p. 87).

Gambat, Khairpur State, Bombay, India.

Fell 1897, Sept. 15.

Stone. Veined intermediate chondrite.

A stone of about 14 lb. fell (letter of March 24, 1898, of H. H. Hayden in Min. Dept. British Museum).

3¼ kg. in Calcutta (Mus. Geol. Surv. India).

Specimen : [83864], 1752 grams.

*Gargantillo, v. Tomatlan.****Garraf, Barcelona, Catalonia, Spain.**

Found 1905.

Synonym : Costal de Garraf.

Stone. White chondrite (?).

A stone of about 8.8 kg. was found (M. Faura i Sans, Butll. Centr. Excurs. Catalunya, 1921, vol. 31, no. 322, p. 270, pl.).

Chief masses in Barcelona (Collegi Comercial de la Bonanova, and Mus. Cienc. Nat.).

Garrett County, v. Ionaconing.

Garz, v. Schellin.

Gawler Range, v. Yardea.

Gay Gulch, v. Klondike.

Gera, v. Pohlitz.

***Gerona, Catalonia, Spain.**

Found 1899.

Synonym: Girona.

Stone. Brecciated grey (to white) chondrite.

A stone of about 148 grams was found in the environs of Gerona (M. Faura i Sans, Butll. Centr. Excurs. Catalunya, 1921, vol. 31, no. 322, p. 270, pls.).

85 grams in Madrid (Mus. Cienc. Nat.), 55 grams in Barcelona (Dr. M. Cazorro's Coll.).

Gettysburg, v. Mount Joy.

Ghazeepore, v. Mhow.

Ghent, v. St. Denis-Westrem.

Ghoordha, v. Moti-ka-nagla.

Gibb's Meteorite, v. Red River.

Gibeon, v. Bethany.

***Gifu, Mino, Japan.**

Fell 1909, July 24, 5.44 a.m.

Synonyms: Aimi; Atobe; Hachiman; Hiromi; Iwa; Izumi;

Kitano; Oyada; Takaro; Taromaru; Umehara.

Stone. White chondrite.

After detonations, over 100 stones fell at Aimi and other villages near Gifu, and about 24 were recovered, the largest weighing about 4 kg. (T. Wakimizu, T. Wada's Beiträge Min. Japan, 1912, no. 4, p. 145). The Hachiman stone analysed by Sugiura (*l.c.*, p. 147).

Gilgoi Station, Brewarrina, County Clyde, New South Wales.

Found in 1889.

Stone. Crystalline bronzite-chondrite.

Seven stones (No. 1-7), weighing respectively about 67½, 74½, 55½, 37, 26½, 16, and 21½ lb., were found scattered over an area of about 4 square miles about 40 miles S.E. of Brewarrina (H. C. Russell, Proc. Roy. Soc. New South Wales, 1889, vol. 23, p. 47, and 1893, vol. 27, p. 361; C. Anderson, Rec. Australian Mus. Sydney, 1913, vol. 10, no. 5, p. 58). No. 1 analysed by A. Liversidge (Journ. and Proc. Roy. Soc. New South Wales, 1902, vol. 36, p. 354), and No. 7 by J. C. H. Mingaye (Rec. Geol. Surv. New South Wales, 1916, vol. 9, p. 166), f = about 14, n = 10, m = 4.

Main mass of No. 1 and of No. 2 in Sydney (Australian Mus.), of No. 5 in Chicago (Field Mus. Nat. Hist.), of No. 6 in Sydney (Mining and Geol. Mus.).

Specimens: [86131], 1975 grams; [1915,151], a piece of No. 7, 261½ grams.

Gilpin County, v. Russell Gulch.

Gindorcha, v. Indarch.

Girgenti, Sicily, Italy.

Fell 1853, Feb. 10, 1 p.m.

Stone. Veined white hypersthene-chondrite.

- Several stones, one of about 7 lb., fell (R. P. Greg, Phil. Mag., 1862, vol. 24, p. 538; O. Buchner, Die Meteoriten in Sammlungen, Leipzig, 1863, p. 84; G. vom Rath, Ann. Phys. (Poggendorff), 1869, vol. 138, p. 541). Analysed by G. vom Rath (*l.c.*, p. 543), $f = 8$, $n = 7$.
1 kg. in Rome University, about $\frac{1}{2}$ kg. in Berlin University, about $\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat.).

Specimens: [1920,303], 132 grams; [55241], 118 grams; [46387], 73 $\frac{1}{2}$ grams; [54762], 41 $\frac{1}{2}$ grams; [90271], 1 gram.

Girona, v. Gerona.

***Glasgow**, Barren County, Kentucky, U.S.A.

Found 1922.

Iron. Coarse octahedrite.

Two masses of about 25 and 20 lb. were found: described by G. P. Merrill and analysed by J. E. Whitfield (Amer. Journ. Sci., 1922, vol. 4, p. 329, and 1923, vol. 5, p. 63).

Glasgow, v. High Possil.

Gindorcha, v. Indarch.

Glorieta Mountain, Canoncito, Santa Fé County, New Mexico, U.S.A.

Found 1884.

Synonyms: Albuquerque; Canoncito; Santa Fé County; Trinity County.

Iron. Medium octahedrite.

Several masses, of a total weight of about 320 lb. and the largest of 148 $\frac{1}{2}$ lb., were found (G. F. Kunz, Amer. Journ. Sci., 1885, vol. 30, p. 235, and 1886, vol. 32, p. 311). A mass of 5 $\frac{1}{2}$ lb. sent from Albuquerque to Denver as silver bullion was analysed by L. G. Eakins (Proc. Colorado Sci. Soc., 1885, vol. 2, pp. 14, 35). No zinc detected by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1919, vol. 14, mem. 1, p. 22). Analyses of taenite, kamacite, schreibersite, and total iron were made by E. Cohen and E. Weinschenk (Ann. Naturhist. Hofmus. Wien, 1891, vol. 6, p. 155; and 1892, vol. 7, p. 143), Ni = 10.40% ($n = 9$).

60 $\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.), 21 $\frac{3}{4}$ kg. in Paris (Mus. d'Hist. Nat.), 25 kg. in New York (Amer. Mus. Nat. Hist.).

Specimens: [56541], 1472 grams; [1906,149], Albuquerque, 1000 grams; [62350], 61 $\frac{1}{2}$ grams; [56569], 56 $\frac{1}{2}$ grams.

Gnadenfrei, between Reichenbach and Frankenstein, Silesia.

Fell 1879, May 17, 4 p.m.

Synonym: Schobergrund.

Stone. Spherical bronzite-chondrite.

Two stones of about 1 and $\frac{3}{4}$ kg. fell, after detonations: described and analysed by J. G. Galle and A. von Lasaulx (Monatsber. Akad. Wiss. Berlin, 1879, p. 750). Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 353), $f = 21\frac{1}{2}$, $n = 12\frac{1}{2}$.

$\frac{3}{4}$ kg. in Breslau University.

Specimen: [55409], 40 $\frac{1}{2}$ grams.

Gnarrenburg, v. Bremervörde.

Goalpara, Assam, India.

Found 1868.

Stone. Ureilite.

A stone of about 6 lb. was found amongst other specimens sent by the Rajah of Goalpara to the Calcutta Museum (W. von Haidinger, *Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1869, vol. 59, Abt. 2, p. 665). Described by G. Tschermak and analysed by N. Teclu (*ibid.*, 1870, vol. 62, Abt. 2, p. 855), $f = 8\frac{1}{2}$, m of olivine = 4, n of pyroxene = 12.

708 grams in Calcutta (Mus. Geol. Surv. India).

Specimens: [51187], 957½ grams; [43058], 227 grams.

Goamus Farm, v. Bethany.

Goldbach's Iron, v. Yanhuitlan.

Gopalpur, Jessore district, Bengal, India.

Fell 1865, May 23, 6 p.m.

Stone. Spherical bronzite-chondrite.

A stone of about 3½ lb. was seen to fall (Proc. Asiatic Soc. Bengal, 1865, p. 94). Described by G. Tschermak and analysed by A. Exner (Tschermaks Min. Mitt., 1872, p. 95), $f = 20$, $n = 11$.

1217 grams in Calcutta (Mus. Geol. Surv. India).

Specimen: [41019], 147 grams.

Goruckpur for Gorakhpur, v. Bustee; Butsura; Dandapur; Pokhra; Supuhee.

Gotha, v. Tabarz.

Gran Chaco Gualamba, v. Otumpa.

Grand Rapids, Kent County, Michigan, U.S.A.

Found 1883.

Synonym: Walker Township.

Iron. Fine octahedrite.

A mass of 114 lb. was found (I. R. Eastman, *Amer. Journ. Sci.*, 1884, vol. 28, p. 299). Analysed by R. B. Riggs (Bull. U.S. Geol. Surv., 1887, vol. 7, p. 94, figs.), Ni = 10.69% ($n = 8$).

Over 12 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [68724], a slice, 1023 grams; [1920,304], a slice, 333 grams; [61923], 112 grams.

Grasse, v. La Caille.

***Grazac**, Tarn, France.

Fell 1885, Aug. 10, 4 a.m.

Synonyms: Montpelagry; Tarn.

Stone. Carbonaceous chondrite.

After detonations, about 20 stones fell between the villages of Grazac and Montpelagry, the largest weighing about 600 grams (A. Caraven-Cachin, *Comptes Rendus Acad. Sci. Paris*, 1887, vol. 104, p. 1813). Described by G. A. Daubrée and S. Meunier (*ibid.*, p. 1771).

Only 22 grams, marked very doubtful, in Paris (Mus. d'Hist. Nat.).

Great Fish River, v. Bethany; Cape of Good Hope.

Great Namaqualand, v. Bethany.

Greenbrier County, West Virginia, U.S.A.

Found 1880.

Synonyms : Alleghany Mountains ; White Sulphur Springs.

Iron. Coarse octahedrite.

A mass of 11 lb. was found near the top of Alleghany Mountains, 3 miles north of White Sulphur Springs : described and analysed by L. Fletcher (Mineral. Mag., 1887, vol. 7, p. 183), $Ni = 7.11\%$ ($n = 13$).

Specimens : [55239], the two chief pieces known, 1777 and 461 grams, and fragments, 94 grams.

Greene County, v. Babb's Mill.

Grenade, v. Toulouse.

Grimma, v. Steinbach.

Griqualand, v. Daniel's Kuil ; Orange River.

Groslée, Belley, Ain, France.

Found 1827.

Synonym : Belley.

Iron.

2 grams in Paris (Mus. d'Hist. Nat.) labelled doubtful (Cat. Météorites Mus. d'Hist. Nat. Paris, 1909, p. 31). Doubtfully meteoric.

Specimen : [34164], two oxidized fragments, 50 grams.

Grosnaja, Mekensk, Terek, Caucasus.

Fell 1861, June 28, 7 p.m.

Synonyms : Miken'skoi ; Terek.

Stone. Black chondrite.

A shower of stones fell, after detonations, but only one of about $3\frac{1}{2}$ kg. was recovered, as the rest fell into the river Terek : described by G. Tschermak and analysed by — Plohn (Tschermaks Min. Petr. Mitt., 1878, vol. 1, p. 153).

Nearly 2 kg. in Petrograd (Mus. Acad. Sci.), in 1897.

Specimens : [63624], $160\frac{3}{4}$ grams ; [35217], $6\frac{1}{2}$ grams.

Gross-Divina, Sillein, Trenčsén, Czechoslovakia.

Fell 1837, July 24, 11.30 a.m.

Synonyms : Budetin ; Nagy-Diwina.

Stone. Spherical chondrite.

A stone of about $10\frac{1}{2}$ kg. fell (D. Zipser, Neucs Jahrb. Min., 1840, p. 89 ; and G. von Boguslavski, Ann. Phys. (Poggendorff), 1854, Ergz.-Bd., vol. 4, p. 356).

10 kg. in Budapest (Hung. Nat. Mus.), $\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [56465], 3 grams ; [35171], a minute fragment.

Grossliebenthal, 12 miles S.S.W. of Odessa, Kherson, Ukraine.

Fell 1881, Nov. 19, 6.30 a.m.

Synonyms : Cherson ; Odessa.

Stone. Veined white hypersthene-chondrite.

After appearance of a fire-ball, a stone of about 8 kg. was found ; another stone fell at "Sitschawska" and was broken up and lost (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1884, vol. 98, p. 323). Analysed by P. G. Melikov and C. Schwalbe (Ber. Deutsch. Chem. Gesell., Berlin, 1893, vol. 26, p. 234), $f = 8$, $n = 5$, $m = 3$.

7 kg. in Odessa University in 1897.

Specimens : [1920,306], 79 grams ; [63928], 54 grams ; [54637], $8\frac{1}{2}$ grams.

Grünberg, v. Grüneberg.

Grüneberg, Silesia.

Fell 1841, March 22, 3.30 p.m.

Synonyms: Grünberg; Heinrichau.

Stone. Veined grey chondrite.

A stone of about 1 kg. fell near Heinrichau, after detonations (Ann. Phys. (Poggendorff), 1841, vol. 52, p. 495; and vol. 53, pp. 172, 416).

$\frac{1}{4}$ kg. in Berlin University.

Specimens: [35179], 21 grams; [90267], $9\frac{1}{2}$ grams.

Guadalupe (of Karavinsky), v. Rancho de la Pila.

Guareña, Badajos, Spain.

Fell 1892, July 20, 10.30 a.m.

Stone. Crystalline chondrite.

Two stones, one of about 25 kg. and the other 7 kg., fell, after detonations, about 5 miles apart: described by S. Calderon and F. Quiroga (Anal. Soc. Españ. Hist. Nat. Madrid, 1893, vol. 22, p. 127), and by E. Cohen (Ann. Naturhist. Hofmus. Wien, 1896, vol. 11, p. 36).

The large stone, in 1897, in A. Cánovas del Castillo's collection, the smaller in Badajoz (La Comision de Monumentos).

Specimen: [85426], 69 grams.

Guatemala, v. Chinautla.

***Guča, Serbia.**

Fell 1891, Sept. 28.

Synonym: Cacak.

Stone.

A piece of 1915 grams was preserved at Belgrad (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 135) in 1897.

Guernsey County, v. New Concord.

***Guffey, Park County, Colorado, U.S.A.**

Found 1907.

Synonym: Currant Creek.

Iron. Ataxite.

A pear-shaped mass of 682 lb. was found on Currant Creek in Freemont County, 22 miles S.W. of Cripple Creek: described (as Currant Creek) and analysed by W. P. Headden (Proc. Colorado Sci. Soc., Denver, 1908, vol. 9, p. 79), Ni = 10% ($n = 9$): also described (as Guffey) by E. O. Hovey, with analysis by the firm of Booth, Garrett, and Blair (Amer. Mus. Journ. New York, 1909, vol. 9, p. 237, 5 figs.), Ni = 10.5% ($n = 8\frac{1}{2}$).

Main mass in New York (Amer. Mus. Nat. Hist.).

Guilford County, North Carolina, U.S.A.

Known before 1822.

Synonym: Randolph County.

Iron. Medium octahedrite.

Two pieces of iron, one of about 2 lb., from Randolph County, and the other weighing 7 oz. from Guilford County (10 to 15 miles distant), were found in a collection of North Carolina minerals and rocks formed by Prof. Olmsted; the smaller piece is said to have come from a mass weighing 28 lb. some of which had been worked by a blacksmith into horseshoe nails (Amer. Journ. Sci., 1822, vol. 5, p. 262; and C. U. Shepard, *ibid.*, 1830, vol. 17, p. 140, and 1841, vol. 40, p. 369).

Less than 100 grams known in collections, 20 grams in Yale University.

Specimens: [24004], Guilford County, 15 grams; [90231a], Randolph County, 2 grams; [15542], Randolph County, $1\frac{1}{2}$ grams.

***Gumoschnik, Trojan, Bulgaria.**

Fell 1904, April 28, 6.20 p.m.

Stone. Grey chondrite.

After detonations, five or six stones were found, the largest weighing 3.8 kg. and the total 5.7 kg.: described and analysed by G. Bontschew (Periodičesko spisanie, Sofia, 1910, vol. 71, p. 373; Abst. in Neues Jahrb. Min., 1912, Bd. 2, p. 354).

Gurdha for *Ghoordha*, v. *Moti-ka-nagla*.**Gurram Konda, between Punganur and Kadapa, Madras, India.**

Fell 1814.

Synonym : Kadapa.

Stone. White chondrite.

Specimen [51188] in British Museum Collection the only known fragment. It was one (numbered H. 62) of a collection of minerals sent to the East India Company's Museum in 1818 by Dr. B. Heyne, who obtained it from Mr. Skinner at Chittoor, who "had received it from the Punganur Rajah residing near Gufram Konda where it fell in the year 1814" (list of minerals sent by Dr. Heyne, in Min. Dept., British Museum).

Specimen : [51188], 8 grams.

Gütersloh, Westphalia, Germany.

Fell 1851, April 17, 8 p.m.

Stone. Brecciated spherical chondrite.

After appearance of fire-ball followed by detonations, next day a stone of about 1 kg., and a year later a smaller stone almost decomposed, were found (Ann. Phys. (Poggendorff), 1851, vol. 83, p. 465, and 1852, vol. 87, p. 500).

Over $\frac{1}{4}$ kg. in Berlin University.

Specimen : [33738], 109 grams.

Gyulatelke, v. *Mocs*.*Hachiman*, v. *Gifu*.*Hacienda Concepcion*, v. *Adargas*.*Hacienda de Bocas*, v. *Bocas*.*Hacienda de Potosi*, v. *Coahuila*.**Hainholz, Minden, Westphalia, Germany.**

Found 1856.

Synonym : Paderborn.

Stony iron. Mesosiderite.

A mass of $16\frac{1}{2}$ kg. was found (F. Wöhler, Ann. Phys. (Poggendorff), 1857, vol. 100, p. 342). Analysed by G. T. Prior (Mineral. Mag., 1918, vol. 18, p. 158), $f = 46$, $n = 10\frac{1}{2}$, m of pyroxene = 2, m of olivine = 7.

 $6\frac{1}{2}$ kg. in Tübingen University, $\frac{1}{4}$ kg. in Vienna (Naturhist. Mus.).

Specimens : [33911], 345 grams; [90233], 155 grams.

Hakata, v. *Higashi-koen*.*Haleb*, v. *Aleppo*.*Hale County*, v. *Plainview*.*Hamblen County*, v. *Morristown*.*Hamersley*, v. *Roebourne*.*Hamilton County*, v. *Anderson*; *Carlton*.*Hamersley*, v. *Roebourne*.

Hammond Township, St. Croix County, Wisconsin, U.S.A.

Found 1884.

Synonyms: Eau Claire; St. Croix County; Wisconsin.

Iron. Hammond octahedrite.

A mass of over 53 lb. was ploughed up (D. Fisher, Amer. Journ. Sci., 1887, vol. 34, p. 381). Described by E. Cohen with analysis by J. Fahrenhorst (Meteoritenkunde, 1905, Heft 3, p. 406), Ni = 7.34% ($n = 12\frac{1}{2}$).

Main mass in Yale University.

Specimen: [67447], 62 grams.

***Haniet-el-Beguel, Oued Mzab, South Algeria.**

Found 1888.

Synonym: Ouaregla.

Iron. Medium octahedrite.

A mass of about 2 kg. was found 5 metres deep in digging a well: described by G. A. Daubr  e (Comptes Rendus Acad. Sci. Paris, 1889, vol. 108, p. 930).

Main mass in Paris (Mus. d'Hist. Nat.).

***Haraiya, Basti district, United Provinces, India.**

Fell 1878, Aug. or Sept.

Stone. White (to grey) chondrite.

After detonations a stone of about 1 kg. was seen to fall (L. L. Fermor, Rec. Geol. Surv. India, 1907, vol. 35, pt. 2, p. 90, figs.). Perhaps identical with Dandapur.

Main mass in Calcutta (Mus. Geol. Surv. India).

*Hariya, v. Dokachi.***Harrison County, Indiana, U.S.A.**

Fell 1859, March 28, 4 p.m.

Stone. Spherical hypersthene-chondrite (howarditic chondrite of Brezina).

A shower of stones fell, after detonations, within an area of four square miles, but only four stones, of total weight about $1\frac{1}{2}$ lb., were found: described and analysed by J. L. Smith (Amer. Journ. Sci., 1859, vol. 28, p. 409), $f = 5$, $n = 6\frac{1}{2}$.

85 grams in Harvard University.

Specimens: [35402], 31 grams; [34612a], 4 grams.

*Harrison County, v. Cynthiana.**Hartford, v. Marion.****Hassi Jekna, Oued Mequiden, El Golea, South Algeria.**

Fell some years before 1890.

Iron. Fine octahedrite.

A pear-shaped mass of $1\frac{1}{4}$ kg. fell, after detonations: described and analysed by S. Meunier (Comptes Rendus Acad. Sci. Paris, 1892, vol. 115, p. 529).

Main mass in Paris (Mus. d'Hist. Nat.).

*Hastings County, v. Madoc.**Hauptmannsdorf, v. Braunau.**Haviland Township, v. Brenham.**Hawaii, v. Honolulu.**Hay, v. Eli. Elwah; Pevensay.***Hayden Creek, Lemhi County, Idaho, U.S.A.**

Found 1895.

Iron. Medium octahedrite.

A mass of 9½ oz. (270 grams) was found by a gold-pro prospector at the bottom of a twelve-foot shaft (W. E. Hidden, Amer. Journ. Sci., 1900, vol. 9, p. 367).

Specimen : [84438], a slice, 79 grams.

Haywood County, v. Ferguson.

**Hebrides, v. Tiree.*

Hedjaz, Arabia.

Fell 1910, spring, night.

Synonym : Et-Tlahi.

Stone. Grey bronzite-chondrite.

After detonations, four stones fell at Et-Tlahi, the largest weighing 4 kg. : described by J. Couyat and analysed by F. Pisani (Comptes Rendus Acad. Sci. Paris, 1912, vol. 155, p. 916), $f = 11$, $n = 10$, $m = 4\frac{1}{2}$.

Main mass in Paris (Mus. d'Hist. Nat.).

Heinrichau, v. Grünberg.

Hejaz, v. Hedjaz.

Hendersonville, Henderson County, North Carolina, U.S.A.

Found 1901.

Stone. Spherical hypersthene-chondrite.

A mass of about 13 lb. was found about 3 miles N.W. of Hendersonville, and it possibly fell in 1876 when a meteor passed over the town (L. C. Glenn, Amer. Journ. Sci., 1904, vol. 17, p. 215). Described by G. P. Merrill and analysed by W. Tassin (Proc. U.S. Nat. Mus. Washington, 1907, vol. 32, p. 79). Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 353), $f = 2\frac{1}{2}$, $n = 8$.

Main mass in Washington (U.S. Nat. Mus.).

Specimen : [1919,87], a slice, 123 grams.

Henry County, v. Hopper; Locust Grove.

Heredia, San José, Costa Rica.

Fell 1857, April 1, night.

Synonyms : Costa Rica; San José.

Stone. Brecciated spherical chondrite.

After appearance of fire-ball and detonations, many stones were found, the largest of about 1 kg. : described and analysed by I. Doneyko (Anal. Univ. Chile, Santiago, 1859, vol. 16, p. 325; O. Buchner, Die Meteoriten in Sammlungen, Leipzig, 1863, p. 98).

422 grams in Göttingen University.

Specimens : [56981], 44 grams; [34671], 9 grams; [35152], $\frac{1}{2}$ gram.

Hermidale, v. Hermitage Plains.

Hermitage Plains, County Canbelego, New South Wales.

Found 1909.

Synonym : Hermidale.

Stone. Grey chondrite.

A mass of about 70 lb. was found 20 miles S.E. of Canbelego (C. Anderson, Rec. Australian Mus. Sydney, 1913, vol. 10, no. 5, p. 60). Analysed by H. P. White (Ann. Rep. Dep. Mines, New South Wales for 1910, 1911, p. 188; and Rec. Geol. Surv. New South Wales, 1920, vol. 9, p. 108), $f = 14$.

Main mass in Sydney (Mining and Geol. Mus.).

Specimen : [1912,86], 667 grams.

Hessle, Upsala, Sweden.

Fell 1869, Jan. 1, 12.30 p.m.

Synonym : Stockholm.

Stone. Spherical bronzite-chondrite.

After detonations, a shower of stones, weighing from about 1.8 kg. to a few grains each, fell over an area of about 3×9 miles : some fell upon ice a few inches thick without breaking it, and powdery carbonaceous matter was found in association with the stones (A. E. Nordenskiöld, Svenska Vetensk.-Akad. Handl. Stockholm, 1870, vol. 8, no. 9; Ann. Phys. (Poggendorff), 1870, vol. 141, p. 205). Analysed by G. Lindström (*ibid.*, p. 217, and Översigt Vetensk.-Akad. Förhandl. Stockholm, 1869, no. 8, p. 715), $f = 19$, $n = 8$, $m = 4$.

7 kg. in Stockholm (Riksmus.), 5 kg. in Upsala University, $4\frac{1}{2}$ kg. in Paris (Mus. d'Hist Nat.).

Specimens : [42467], 365 grams; [42468], half a stone, 331 grams; [42470], a complete stone, $144\frac{1}{2}$ grams; [42469], 47 grams; [42471], three small stones, 16 grams; [42473], a small stone, $1\frac{1}{4}$ grams; [42472], three very small stones, 1 gram.

Hex River Mountains, Cape Province, South Africa.

Found 1882.

Iron. Hexahedrite.

A mass of about 60 kg. was found (A. Brezina, Verh. Geol. Reichsanst. Wien, 1887, p. 289, fig.). Analysed by E. Cohen and E. Weinschenk, and by R. Knauer (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 222), Ni = 5.68% ($n = 16$).

$37\frac{3}{4}$ kg. in Vienna (Naturhist. Mus.), $2\frac{1}{2}$ kg. in Budapest (Hung. Nat. Mus.).

Specimens : [1921, 19], a slice, $285\frac{1}{2}$ grams; [77098], a slice, 245 grams.

Hidalgo, v. Pacula.**Higashi-kōen, Fukuoka, Chikuzen, Japan.**

Fell 1897, Aug. 11.

Synonym : Hakata.

Stone. Grey chondrite.

A stone of about $\frac{3}{4}$ kg. fell (K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, p. 50).

Specimen : [84043], $29\frac{1}{2}$ grams.

Highland County, v. Pricetown.**High Possil, Glasgow, Lanarkshire, Scotland.**

Fell 1804, April 5, morning.

Synonym : Glasgow.

Stone. White chondrite.

After detonations, a stone of about 10 lb. was seen to fall, and broke into two pieces, one about 2 in. long, and the other measuring $6 \times 4 \times 4$ in.; most of the stone was subsequently lost (A. Tillock, Phil. Mag., 1804, vol. 18, p. 371).

26 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [19970], $91\frac{1}{2}$ grams.

Hill's Stone, v. Travis County.

Hüromi, v. Gifu.

Hishikari, v. Kyushu.

Hishugari for *Hishikari, v. Kyushu.*

Hizen, v. Ogi.

***Hobart West**, near Grootfontein, Bechuanaland, South West Africa.
Iron.

A mass estimated at about 40 tons and measuring about $2\frac{1}{2} \times 2\frac{1}{2} \times 8$ metres (verbal communication from Dr. C. Palache, 1922) was found and has not been moved.

Holbrook, Navajo County, Arizona, U.S.A.

Fell 1912, July 19, 7.15 p.m.

Synonym : Aztec.

Stone. Crystalline spherical hypersthene-chondrite.

After appearance of a smoky trail in the sky, and detonations, a shower of stones fell, estimated to number 14,000, of a total weight of about 481 lb., with individuals varying in weight from $14\frac{1}{2}$ lb. to a few grains : described by W. M. Foote with partial analysis by G. C. Davis (Amer. Journ. Sci., 1912, vol. 34, p. 437), and by G. P. Merrill with analysis by J. E. Whitfield (Smithsonian Misc. Coll. Washington, 1912, vol. 60, no. 9, Publ. 2149), $= 5$, $n = 5$ (G. C. Davis), $m = 3\frac{1}{2}$.

196 stones weighing 11 kg. in Chicago (Field Mus. Nat. Hist.), $3\frac{1}{2}$ kg. ($\frac{1}{4}$ stones) in Washington (U.S. Nat. Mus.).

Specimens : 100 mostly complete stones, [1912,653-678], having a total weight of 7855 grams, the largest weighing $3120\frac{1}{2}$ grams and the smallest 0.329 gram.

Holland's Store, Chattooga County, Georgia, U.S.A.

Found 1887.

Synonym : Chattooga County.

Iron. Brecciated hexahedrite.

A mass of 27 lb. was found and was afterwards broken up : described by G. F. Kunz with analysis by J. E. Whitfield (Amer. Journ. Sci., 1887, vol. 34, p. 471). Also described by E. Cohen with analysis by — Zaubitzer (Meteoritenkunde, 1905, Heft 3, p. 239), Ni = 5.35% ($n = 17$).

Over 2 kg. in Vienna (Naturhist. Mus.).

Specimen : [67445], 194 grams.

Homestead, Iowa County, Iowa, U.S.A.

Fell 1875, Feb. 12, 10.15 p.m.

Synonyms : Amana ; Iowa County ; Marengo ; Sherlock ; West Liberty.

Stone. Brecciated grey bronzite-chondrite.

After appearance of a brilliant fire-ball (moving from south to north), and detonations, about 100 stones, weighing together about 500 lb. and the largest about 74 lb., were found scattered over an area of about 18 square miles from Amana to Boltonville (G. Hinrichs, Popular Science Monthly, New York, September, 1875; N. R. Leonard, Amer. Journ. Sci., 1875, vol. 10, p. 357). Described by C. W. Gumbel (Sitzungsber. Akad. Wiss. München, Math.-Phys. Cl., 1875, vol. 5, p. 313). Analysed by G. T. Prior (Mineral. Mag., 1918, vol. 18, p. 173), $f = 11$, $n = 8$, $m = 4$.

35 kg. in Yale University, over 19 kg. in Chicago (Field Mus. Nat. Hist.), 17 kg. in Harvard University.

Specimens : [48474], a complete stone obtained from G. Hinrichs, 3800 grams ; [50803], 127 grams.

*Honduras, v. Rosario.***Honolulu**, Oahu, Hawaiian Islands.

Fell 1825, Sept. 27, 10.30 a.m.

Synonyms: Hawaii; Sandwich Islands.

Stone. Veined white hypersthene-chondrite.

After detonations, several stones fell, two of which weighed about $1\frac{1}{2}$ kg. each (E. Hofmann, Karsten's Arch. Min. Berlin, 1829, vol. 1, p. 311). Analysed by A. Kuhlberg (Arch. Naturk. Liv-, Ehst- u. Kurlands, Ser. i, Min. Wiss., Dorpat, 1867, vol. 4, p. 14).

577 grams in Yale University, 549 grams in Dorpat University, 438 grams in Petrograd (Mus. Acad. Wiss.) in 1897.

Specimens: [36609(7), $42\frac{1}{2}$ grams; [25460], 24 grams; [34603], $14\frac{1}{2}$ grams; [1920,307], 5 grams.

***Hopewell Mounds**, Ross County, Ohio, U.S.A.

Prehistoric.

Iron. Medium octahedrite.

A piece of 130 grams was found near an altar of one of the mounds: described by O. C. Farrington with analysis by H. W. Nichols (Publ. Field Columbian Museum, Chicago, 1902, Geol. Ser., vol. 1, p. 310, 2 pls.).

Main mass in Chicago (Field Mus. Nat. Hist.).

***Hopper**, Henry County, Virginia, U.S.A.

Found 1889.

Synonym: Henry County.

Iron. Medium octahedrite.

A mass of about 4 lb. was found: described and analysed by F. P. Venable (Amer. Journ. Sci., 1890, vol. 40, p. 162), Ni = 7.70% ($n = 12$).

*Horowitz, v. Zembrak.**Howard County, v. Kokomo.***Hraschina**, Zagreb (= Agram), Croatia, Yugoslavia.

Fell 1751, May 26, 6 p.m.

Synonym: Agram.

Iron. Medium octahedrite.

After appearance of fire-ball which divided into two parts with detonations, two masses of about 40 kg. and 9 kg. respectively were found to have fallen (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1859, vol. 35, p. 361, figs.). Analysed by A. Wehrle (Baumgartner's Zeits. Phys. Wien, 1835, vol. 3, p. 224), Ni = 8.88% ($n = 10$).

The smaller stone appears to have been lost: the main mass of the larger (39 kg.) in Vienna (Naturhist. Mus.).

Specimen: [19963], 282 grams.

*Huejuquilla, v. Adargas; Chupaderos; Morito; Rio Florido; Sierra Blanca; Tule.**Huesca, v. Roda.***Huizopa**, Temosachic, Guerrero district, Chihuahua, Mexico.

Found 1907.

Synonym: Temosachic.

Iron. Fine octahedrite.

A mass of 108½ kg. and four smaller masses of from 5 to 10 kg. were found in a ruin near Huizopa, 60 miles west of Temosachic, and were brought to Chihuahua for sale as silver ore (authority, G. Griggs, Director State Mining Exhibition, Chihuahua, in 1908, according to letters of R. Tower, 1908, in Min. Dept., British Museum).

The repository of these large masses unknown.

Specimen : [1908,239], 1495 grams.

Humboldt Iron, v. Morito.

Hungen, Hesse, Germany.

Fell 1877, May 17, 7 a.m.

Stone. Veined grey chondrite.

After detonations, a stone of 86 grams was seen to fall, and another of 26 grams was found later in a wood 3 miles from Hungen (O. Buchner, *Tschermaks Min. Petr. Mitt.*, 1877, p. 313).

56 grams in Giessen University, 26 grams in Vienna (Nat. Hist. Mus.).

Specimen : [54632], 5½ grams.

Hunsrück, v. Simmern.

Hvittis, Åbo, Finland.

Fell 1901, Oct. 21, noon.

Stone. Crystalline enstatite-chondrite.

After detonations, three days later, a stone of 14 kg. was found : described and analysed by L. H. Borgström (Bull. Comm. Géol. Finlande, 1903, no. 14), $f = 21$, $n = 10$, $m = \infty$, contains oldhamite and daubréelito.

Main mass in Helsingfors (Geol. Kom.).

Specimen : [86754], 153 grams.

Ibbenbüren, Westphalia, Germany.

Fell 1870, June 17, 2 p.m.

Stone. Diogenite (hypersthene-achondrite).

After detonation and appearance of light, a stone of about 2 kg. was found two days later : described and analysed by G. vom Rath (Ann. Phys., (Poggendorff), 1872, vol. 146, p. 463), $m = 2½$.

Main mass in Berlin University.

Specimen : [46270], 3 grams.

Iglau, v. Stannern.

Iharaoka, v. Lalitpur.

Ihung, v. Jhung.

Ilimaë, v. Ilimaes (iron).

Ilimaes (pallasite), Taltal, Atacama, Chile.

Found about 1874-5.

Stony-iron. Pallasite.

A mass of about 95 kg. was found 12 leagues south of Taltal (H. A. Ward, Proc. Rochester Acad. Sci., 1906, vol. 4, p. 225).

Main mass in Copiapo (Lyceo), a 11 kg. mass in Chicago (Field. Mus. Nat. Hist.).

Specimen : [1906,52], a slice, 266½ grams.

Ilimaes (iron), Taltal, Atacama, Chile.

Known since 1870.

Synonyms : Atacama desert; Ilimaë.

Iron. Medium octahedrite.

A mass of about 51 kg. was found at "Ilimaš" (probably misprint for Ilimaes) in about Lat. 26° 5 S. and Long. 70° W. (L. Fletcher, *Mineral. Mag.*, 1889, vol. 8, p. 260). Described by G. Tschermak and analysed by C. Ludwig (*Denkschr. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1872, vol. 31, p. 187) Ni = 7.82% ($n = 12$). Possibly identical with Chafñaral and Merceditas.

Main mass in Vienna (Naturhist. Mus.).

Specimen: [67450], 39½ grams.

Illinois Gulch, Deer Lodge County, Montana, U.S.A.

Found 1899.

Synonym: Ophir.

Iron. Nickel-rich ataxite.

A mass of about 2½ kg. was found about 4 feet below the surface (H. L. Preston, *Amer. Journ. Sci.*, 1900, vol. 9, p. 201). Described by E. Cohen and analysed by J. Fahrenhorst (*Meteoritenkunde*, 1905, Heft 3, p. 83), Ni = 12.67% ($n = 7$).

662 grams in Chicago (Field Mus. Nat. Hist.).

Specimen: [84785], a slice, 637 grams.

Imilac, Desert of Atacama, Chile.

Known in 1822.

Synonyms: Atacama; Campo del Pucará; Caracoles; La Encantada; Potosi; San Pedro.

Stony-iron. Pallasite.

Numerous masses weighing together several hundredweights, with individuals up to 450 lb., were found in a valley to the S.W. of Imilac (23° 49' S. 60° 14' W.) (T. Allan, *Trans. Roy. Soc. Edinburgh*, 1831, vol. 11, p. 223; L. Fletcher, *Mineral. Mag.*, 1889, vol. 8, p. 243). Analysed by F. von Kobell and — Rivéro (*Korr.-Bl. Zool. Min. Ver. Regensburg*, 1851, p. 112), $n = 9$, $m = 7$. The specimen found in 1879 at Campo del Pucará, Argentina, which was analysed by E. Cohen, was probably carried from Imilac (E. Cohen, *Neues Jahrb. Min.*, 1887, Bd. 2, p. 45), Ni = 9.02% ($n = 10$).

10½ kg. in Oxford University.

Specimens: [53322], a large mass presented by G. Hicks in 1879, 198,100 grams (437 lb.); [90239], presented by Sir Woodbine Parish, 9265 grams; [90240], 2120 grams; [27283], presented by W. Bollacrt, 1950 grams; [40534], 254 grams; [80669], 201½ grams; [33923], 176½ grams; [40535], 160½ grams; [1911,720], 129½ grams; [33939], 111 grams; [33955], 51 grams; [35789], 37½ grams; [27216a], 5½ grams; [27217], 1 gram.

Inca for Llano del Inca, v. Vaca Muerta.

Indarch, Shusha, Elisavetpol, Transcaucasia.

Fell 1891, April 7, 8.10 p.m.

Synonyms: Elisabethpol; Gindorcha; Glindorcha; Schuscha.

Stone. Carbonaceous spherical chondrite.

After detonations and appearance of "flame," a stone of about 27 kg. fell, and was found next morning (Y. I. Simashko, *Cat. Météorites*, St.-Petersbourg, 1891, p. 55; S. Meunier, *Comptes Rendus Acad. Sci. Paris*, 1897, vol. 125, p. 894). Described by U. P. Merrill and analysed by J. E. Whitfield (*Proc. U.S. Nat. Mus. Washington*, 1915, vol. 49, p. 109).

Main mass (18 kg.) in Chicago (Field Mus. Nat. Hist.).

Specimens : [86948], 342 grams ; [1921,23], $101\frac{1}{2}$ grams ; [70350], $34\frac{1}{2}$ grams ; [68726], $8\frac{1}{2}$ grams.

Independence, v. Kenton County.

Independence County, v. Joe Wright Mountain.

Indian Valley Township, Floyd County, Virginia, U.S.A.

Found 1887.

Synonyms : Floyd County ; Floyd Mountain ; Radford Furnace.

Iron. Brecciated nickel-poor ataxite to hexahedrite.

A mass of 31 lb. was ploughed up near the base of the south side of Floyd Mountain : described by (G. F. Kunz and E. Weinschenk, and analysed by L. G. Eakins (Amer. Journ. Sci., 1892, vol. 43, p. 424), Ni = 5.56% ($n = 17$). Also described by E. Cohen (Meteoritenkunde, 1905, Heft 3, p. 237).

$9\frac{1}{2}$ kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [84192], a slice, 82 grams.

Indio Rico, Buenos Aires, Argentina.

Found 1887.

Stone. Crystalline chondrite.

A stone of 15 kg. was found : described and analysed by J. J. J. Kyle (Anal. Soc. Cient. Argentina, Buenos Aires, 1887, vol. 24, p. 128).

Specimen : [85673], $1\frac{1}{2}$ grams.

Invercargill, v. Makariwa.

Iowa, v. Estherville ; Forest City ; Homestead ; Marion.

***Ipacaray Lake, Paraguay.**

Fell before 1877.

Stone (?).

After detonations, a nearly spherical stone, two yards in diameter, is said to have fallen and penetrated the soil to a depth of two yards (Anal. Soc. Cient. Argentina, Buenos Aires, 1877, vol. 3, p. 336).

***Iquique, Pampa del Tamarugal, Tarapaca, Chile.**

Found 1871.

Iron. Nickel-rich ataxite.

A mass of $12\frac{1}{2}$ kg. was found embedded in nitrate, 30 miles east of Iquique (G. Rose, Festschr. Gesell. Naturforsch. Freunde Berlin, 1873, p. 33; and Amer. Journ. Sci., 1874, vol. 8, p. 398).

Main mass ($10\frac{1}{2}$ kg.) in Berlin University.

Irapuato, v. La Charca.

***Iredell, Bosque County, Texas, U.S.A.**

Found 1898.

Iron. Hexahedrite.

A mass of about $1\frac{1}{2}$ kg. was found on a sheep ranch, 5 or 6 miles S.W. of Iredell, but only about $\frac{1}{2}$ kg. has been preserved (W. M. Foote, Amer. Journ. Sci., 1899, vol. 8, p. 415). Analysed by J. E. Whitfield (*l.c.*), Ni = 5.51% ($n = 17$). Described by E. Cohen (Meteoritenkunde, 1905, Heft 3, p. 225).

98 grams in Washington (U.S. Nat. Mus.).

Irkutsk, v. Doroninsk; Tounkin.

Iron Creek, Battle River, north Saskatchewan, Canada.

Known before 1869.

Synonyms: Battle River; Saskatchewan; Victoria.

Iron. Medium octahedrite.

A mass of 386 lb. on a hill near Iron Creek had been long known to the Indians before its removal to Victoria about 1869 (A. P. Coleman, Trans. Roy. Soc. Canada, 1886 (1887), vol. 4, sec. 3, p. 97). Analysed by A. P. Coleman (*l.c.*, p. 97), Ni = 8.83% ($n = 10$). Described by O. C. Farrington (Publ. Field Columbian Mus. Chicago, 1907, Geol. Ser., vol. 3, p. 113).

Main mass in Victoria College, Toronto.

Specimen: [63548], 79½ grams.

Ironhannock Creek, v. Tomhannock Creek.

Irwin-Ainsu Iron, v. Tucson.

Irwin Meteorite, v. Tucson.

Isle de France, v. Mauritius.

Itapicuru-Mirim, Maranhão, Brazil.

Fell 1879, March.

Stone. Spherical chondrite.

A stone of 2 kg. fell (O. A. Derby, Amer. Journ. Sci., 1888, vol. 36, p. 157).

Main mass in Rio de Janeiro (Mus. Nac.).

Specimen: [63234], 6¼ grams.

Ivanpah, San Bernardino County, California, U.S.A.

Found 1880.

Synonym: San Bernardino County.

Iron. Medium octahedrite.

A mass of about 128 lb. was found (C. U. Shepard, Amer. Journ. Sci., 1880, vol. 19, p. 381). Analysed by — Manteuffel (E. Cohen, Ann. Naturhist. Hofmus. Wien, 1892, vol. 7, p. 149), Ni = 7.43% ($n = 12½$).

Main mass in California (State Mining Bureau Museum).

Specimens: [56161], 19 grams; [64144*], 14 grams.

Iwa, v. Gifu.

Iwate, v. Kesen; Takenouchi.

Ixtlahuaca, v. Toluca.

Izumi, v. Gifu.

Jacala, v. Pacula.

Jackalsfontein, Beaufort West, Cape Province, South Africa.

Fell 1903, April 22, 11.30 a.m.

Synonym: Fraserburg.

Stone. Intermediate chondrite.

Two stones, one very large, fell after detonations, to the N.W. of Uitkijk on the boundary of the farms Tamboersfontein and Jackalsfontein (letter of L. Peringuey of Aug. 12, 1919, in Min. Dept., British Museum).

Main mass of smaller stone in Cape Town (South African Museum).

Specimen: [1908,431], three fragments of the smaller stone, 65½ grams.

Jackson County, Tennessee, U.S.A.

Known 1846.

Iron. Medium octahedrite.

A piece of about 1 lb. from a large mass (since lost sight of) was described by G. Troost (Amer. Journ. Sci., 1846, vol. 2, p. 357).

116 grams in Chicago (Field Mus. Nat. Hist.).

Specimen : [33957], 91 grams.

*Jalisco, v. Tomatlan.**Jamaica, v. Lucky Hill.***Jamestown, Stutsman County, North Dakota, U.S.A.**

Found 1885.

Synonym : Stutsman County.

Iron. Fine octahedrite.

A mass of about 4 kg. was found 15 to 20 miles S.E. of Jamestown : described and analysed by O. W. Huntington (Proc. Amer. Acad. Arts and Sci., Boston, 1891, vol. 25 (vol. 17, new ser.), p. 229), Ni = 9.75% ($n = 9$).

1½ kg. in Harvard University.

Specimen : [67215], the largest piece preserved, 1627 grams.

Jamkheir, Ahmadnagar district, Bombay, India.

Fell 1866, Oct. 5, noon.

Stone. Brecciated spherical chondrite.

Two stones of "size of a wood-apple" (about 4 in. diameter) are said to have fallen after detonations, but only small fragments were recovered (copy of W. D'Oyly's letter of Feb. 14, 1867, to Government Secretary, Bombay, in Min. Dept., British Museum).

Specimen : [40602], the largest piece preserved, 15½ grams.

*Jamyscheva, v. Pavlodar.**Janacera Pass, v. Vaca Muerta.**Japan, v. Ogi.**Jarquera, v. Vaca Muerta.**Jasly, v. Bialystok.****Jefferson, 30 miles from Denver, Colorado, U.S.A.**

Fell 1867, June.

Iron.

A fragment of 41 grams of this doubtful iron is in the Shepard Collection in the U.S. Nat. Mus. Washington (G. P. Merrill, Cat. Meteorite Coll. U.S. Nat. Mus. Washington, 1916, p. 186).

*Jefferson City, v. Little Piney.**Jefferson County, v. Bear Creek.***Jelica, Serbia.**

Fell 1889, Dec. 1, 2.30 p.m.

Synonym : Cacak; Jeliza.

Stone. Amphoterite.

After detonations and appearance of light, a shower of stones fell over an area of 5 × 3 miles : the stones, of which 26 or more were found, varied in weight from 8½ kg. to 70 grams and had a total weight of about 34 kg. (E. Doll, Verh. Geol. Reichsanst. Wien, 1890, p. 70; G. von Niessl,

Verh. Naturforsch. Ver. Brünn, 1890 (1891), vol. 29, p. 166). Analysed by S. M. Losanitsch (Ber. Deutsch. Chem. Gesell. Berlin, 1892, vol. 25, p. 876), $f = 1\frac{1}{2}$, $n = 2$, m of pyroxene = 2, m of olivine = 2.

Main mass (30.8 kg.) in Belgrade Museum, $1\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.).

Specimens: [65486], a nearly complete stone, 1511 grams; [65605], 364 grams; [1920,308], 3 grams.

Jeliza, v. Jelica.

Jemlapur, India (?).

Fell 1901, February.

Stone. Intermediate chondrite.

A stone of about 1 lb., labelled "Jemlapur, Muddera Tk (fell Feb. 01)," was found in a curio dealer's shop in Beckenham in 1913, but neither locality nor fall of meteorite on that date can be traced (G. T. Prior, Nature, London, 1916, vol. 97, p. 241).

Specimen: [1918,364], the nearly complete stone, 468 grams.

Jennies Creek, v. Jenny's Creek.

Jenny's Creek, Wayne County, West Virginia, U.S.A.

Found 1883.

Synonyms: Charleston; Kanawha County; Old Fork; Wayne County.

Iron. Coarse octahedrite.

Three masses, of about 23, $2\frac{1}{2}$, and 1 lb. respectively, were found in 1883-85, but only about 2 lb. have been preserved (G. F. Kunz, Proc. Amer. Assoc., 1885, vol. 34, p. 246). Analysed by J. B. Mackintosh (l.c., p. 249), $Ni (+Co) = 8.31\%$ ($n = 11$).

$\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.).

Specimen: [56918], 78 grams.

***Jerome**, Gove County, Kansas, U.S.A.

Found 1894.

Stone. Crystalline spherical bronzite-chondrite.

A much oxidized mass of 62 lb., and several smaller pieces weighing together $3\frac{1}{4}$ lb., were found on the Smoky Hill River, 15 miles east of Jerome; described and analysed by H. S. Washington (Amer. Journ. Sci. 1898, vol. 5, p. 447), $f = 4$, $n = 9$, m of pyroxene = 5.

Main mass in Yale University.

Jewell Hill, v. Duel Hill.

Jhang, v. Jhung.

Jharaota, v. Lalitpur.

Jhung, Punjab, India.

Fell 1873, June, 3 p.m.

Synonyms: Jhung; Jhang.

Stone. Spherical chondrite.

After detonations, four stones, of 6, 4, 2, and 1 lb. respectively, fell in villages, in a line from south to north, in the district of Jhang (copy of report of G. Lewis accompanying letter of Dec. 9, 1875, from A. Brandreth to the Royal Society, in Min. Dept., British Museum).

790 grams in Calcutta (Mus. Geol. Surv. India).

Specimen: [51190], a nearly complete stone, 1770 grams, and pieces, 69 grams.

Jigalovka, v. Kharkov.

Jimenez, v. Huejuquilla.

Jodzic, Panevezys, Kovno, Lithuania.

Fell 1877, June 17, 4.30 a.m.

Synonym: Yodzc.

Stone. Brecciated howardite.

A stone of unknown weight fell near the village Jodzic and was lost except for a few fragments (Y. I. Simashko, letter of Nov. 16, 1891, in Min. Dept., British Museum, and his label with specimen [68214]; A. Brezina, Verh. Gesell. Deutsch. Naturforsch. Nürnberg, 1893, vol. 65, p. 159).

48 grams in Chicago (Field Mus. Nat. Hist.), 1 gram in Paris (Mus. d'Hist. Nat.), 1 gram in Vienna (Naturhist. Mus.).

Specimen: [68214], 1½ grams.

Joel's Iron, Desert of Atacama, Chile.

Found 1858.

Synonyms: Atacama Desert; Cobija.

Iron. Medium octahedrite.

A mass of 1300 grams, found in 1858 in an unspecified part of the desert, was presented to the British Museum in 1863 by Mr. Lewis Joel, the British Vice-Consul at Cobija: described and analysed by L. Fletcher (Mineral. Mag., 1889, vol. 8, p. 263), Ni = 8.80% ($n = 10$).

Specimen: [35782], the main mass, 1144 grams, and pieces, 62 grams.

Joe Wright Mountain, Independence County, Arkansas, U.S.A.

Found 1884.

Synonyms: Batesville; Elmo; Independence County.

Iron. Medium octahedrite.

A mass of 94 lb. was found 7 miles east of Batesville (W. E. Hidden, Amer. Journ. Sci., 1886, vol. 31, p. 461). Analysed by E. Cohen and E. Weinschenk (Ann. Naturhist. Hofmus. Wien, 1891, vol. 6, p. 158), Ni = 7.53% ($n = 12$).

Main mass (33 kg.) in Vienna (Naturhist. Mus.).

Specimen: [56919], a slice, 372 grams.

Johanngeorgenstadt, v. Steinbach.

Johnson County, v. Cabin Creek.

***Jonesboro**, Washington County, Tennessee, U.S.A.

Found 1891.

Synonym: East Tennessee.

Iron. Fine octahedrite.

Nothing known as to the history of this meteorite: a piece of 1 oz. (about 30 grams) which was in Ward's Natural Science Establishment in 1892 (H. A. Ward, Cat. Meteorites, Rochester, New York, 1892, p. 15) was acquired by the Naturhist. Mus., Vienna. Described by E. Cohen (Meteoritenkunde, 1905, Heft 3, p. 388).

Jonzac, Charente Inférieure, France.

Fell 1819, June 13, 6 a.m.

Synonym : Saintonge.

Stone. Eucrite.

After appearance of luminous meteor and detonations, a shower of stones fell, the two largest of which weighed 3 kg. and 2 kg. respectively (Fleurian de Bellevue, *Journ. Physique*, Paris, 1821, vol. 92, p. 136).

1 kg. in Vienna (*Naturhist. Mus.*), $\frac{1}{4}$ kg. in Paris (*Mus. d'Hist. Nat.*).

Specimen : [19974], 9 grams.

Juchnow, v. Timochin.

Judesegeeri, Tumkur district, Mysore, India.

Fell 1876, Feb. 16, evening.

Synonym : Mysore.

Stone. Spherical chondrite.

After appearance of luminous meteor and detonations, a stone fell in the bed of the tank of Judesegeeri village; it was broken up and only fragments weighing about $1\frac{1}{2}$ lb. were preserved (H. B. Medlicott, *Proc. Asiatic Soc. Bengal*, 1876, p. 221).

300 grams in Calcutta (*Mus. Geol. Surv. India*).

Specimen : [51367], two pieces, 114 grams, and $16\frac{1}{2}$ grams.

Judesgherry, v. Judesegeeri.

Juncal, Desert of Atacama, Chile.

Found 1866.

Iron. Medium octahedrite.

A mass of 104 kg. was found between the Rio Juncal and the Salinas de Pedernal (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1868, vol. 66, p. 568; L. Fletcher, *Mineral. Mag.*, 1889, vol. 8, p. 261). Analysed by A. A. Damour (G. A. Daubrée, *l.c.*, p. 571), Ni = 7.00% ($n = 13$).

Main mass in Paris (*Mus. d'Hist. Nat.*), $\frac{3}{4}$ kg. in Vienna (*Naturhist. Mus.*).

Specimens : [68580], 70 grams; [43202], $2\frac{1}{2}$ grams.

Juvinas, Libonnès, Entraigues, Ardèche, France.

Fell 1821, June 15, 3 p.m.

Synonym : Libonnez.

Stone. Eucrite.

After appearance of fire-ball and detonations, a stone of over 91 kg. fell near the village of Libonnès (L. W. Gilbert, *Ann. Phys.* (Gilbert), 1821, vol. 69, p. 407; and *Ann. Chim. Phys.*, Paris, 1821, vol. 17, p. 434). Analysed by C. Rammelsberg (*Ann. Phys.* (Poggendorff), 1848, vol. 73, p. 585) and by J. E. Whitfield (G. P. Merrill, *Mem. Nat. Acad. Sci. Washington*, 1916, vol. 14, mem. 1, p. 19), $m = \frac{2}{3}$.

42 kg. in Paris (*Mus. d'Hist. Nat.*), nearly 2 kg. in Tübingen University.

Specimens : [90263], 526 grams; [458], 414 grams; [1920,309], 21 grams; [90262], 3 grams.

***Kaaba**, Mecca, Arabia.

Mentioned 1772.

Synonym : Mecca.

Stone.

A stone built in the sanctuary of the Kaaba in Mecca is probably meteoric (P. Partsch, *Denkschr. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1857, vol. 13, pp. 1-5; full bibliography in E. A. Wülfing's *Die Meteoriten in Sammlungen*, Tübingen, 1897, p. 400).

Kaande, v. Oesel.

Kaba, Debreczen, Hungary.

Fell 1857, April 15, 10 p.m.

Synonym : Debreczen.

Stone. Carbonaceous hypersthene-chondrite.

After appearance of fire-ball and detonations, a stone of about 3 kg was found (J. von Török, Ann. Phys. (Poggendorff), 1858, vol. 105, p. 329, 3 figs.). Analysed by F. Wöhler (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1858 (1859), vol. 33, p. 205), $f = 4$, $n = 2\frac{1}{2}$, $m = 1\frac{1}{2}$.

2 kg. in Debreczen College in 1897.

Specimens : [35794], 100 grams; [33969a], $4\frac{1}{2}$ grams.

Kadapa, v. Gurram Konda.

Kadonah, Agra district, United Provinces, India.

Fell 1822, Aug. 7, night.

Synonyms : Agra; Doab.

Stone. Veined grey chondrite.

A large stone (weight not recorded) fell, after detonations, near the village Kadonah and was found next morning (Rep. British Assoc. for 1850, 1851, p. 120).

Very little preserved; 4 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [35852], 39 grams.

Kae, Sandi pargana, Hardoi district, United Provinces, India.

Fell 1838, Jan. 29.

Synonym : Oude.

Stone. Spherical chondrite.

After detonations, a stone of about $\frac{1}{2}$ lb. fell in the village of Kae (N. S. Maskelyne, Phil. Mag., 1864, vol. 28, p. 149).

Specimen : [35605], most of the stone, 209 grams.

Kahangarai, v. Kakangari.

Kakangari, Tirupathur taluq, Salem, Madras, India.

Fell 1890, June 4, 8 a.m.

Synonyms : Kahangarai; Salem.

Stone. Spherical chondrite.

After detonations, two stones were seen to fall; one was broken up, the other weighed about $\frac{3}{4}$ lb (Nature, London, 1892, vol. 45, p. 20).

188 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [69062], $122\frac{1}{2}$ grams.

Kakowa, Oravicza, Krassó-Szörény, Rumania.

Fell 1858, May 19, 8 a.m.

Stone. Veined grey hypersthene-chondrite.

After detonations, a stone of 577 grams was seen to fall (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1859, vol. 34, p. 11). Analysed by E. P. Harris (F. Wöhler, *ibid.*, p. 8). Amount and composition of the nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 353), $f = 8$, $n = 6$.

• $\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.).

Specimen : [35166], 150 grams.

Kalambi, v. Kalumbi.

Kalumbi, Satara district, Bombay, India.

Fell 1879, Nov. 4.

Synonym : Kalambi.

Stone. Veined white chondrite.

A stone of about 10 lb. fell at Kalambi (Journ. Bombay Branch Roy. Asiatic Soc., 1880, vol. 14, p. lv).

Main mass probably in Bombay (Mus. Roy. Asiatic Soc.).

Specimens : [64509], 28 grams; [64510], 1 gram.

***Kamsagar**, Shimoga district, Mysore, India.

Fell 1902, Nov. 12, 1 p.m.

Stone. Intermediate chondrite.

A stone of 1293 grams fell (J. Coggin Brown, Rec. Geol. Surv. India, 1915, vol. 45, p. 223).

The complete stone (broken into two pieces) in Calcutta (Mus. Geol. Surv. India).

Kanawha County, v. Jenny's Creek.

Kangra Valley, Punjab, India.

Fell about 1897.

Stone. Spherical chondrite.

A stone of about 400 grams, labelled "Seen to fall in the Kangra Valley, north Punjab," was sent by Col. St. John Grant to W. N. Hartley on July 21, 1897 (W. N. Hartley, Journ. Chem. Soc. London, Trans., 1906, vol. 89, pt. 2, p. 1566).

Specimen : [1207,22], the nearly complete stone, 395 grams.

Kansada, v. Ness County.

Kansas, v. Tonganoxi.

***Kansas City**, Missouri, U.S.A.

Found 1903.

Stone. Crystalline spherical chondrite.

A much oxidized stone of 36 kg. was found in Kansas City, some 6 ft. below the surface (G. P. Merrill, Proc. U.S. Nat. Mus. Washington, 1919, vol. 55, p. 95, 2 pls.).

Kantarah, v. Sinai.

Kanwahoe County for *Kanawha County, v. Jenny's Creek.*

***Kanzaki**, Hizen, Japan.

Stone.

A small stone of 123½ grams of which the history is unknown is in the Museum of the Geol. Surv. Japan : it resembles Kyushu and is possibly identical (K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, pp. 32, 51).

Kapeisen, v. Cape of Good Hope.

Karakol, Ayagus, Semipalatinsk, Siberia.

Fell 1840, May 9, noon.

Synonym : Kirghiz Steppes.

Stone. White chondrite.

A stone of about 3 kg. fell, after detonations, by the river Karakol (E. von Eichwald, A. Erman's Arch. Wiss. Kunde Russland, Berlin, 1847, vol. 5, p. 180; A. Göbel, Bull. Acad. Sci. St.-Petersbourg, 1867, vol. 11, p. 264, fig.). Y. J. Simashko says two stones fell, one of which was

broken up by the natives (Cat. Coll. Météorites, St.-Petersbourg, 1891, p. 34).

2½ kg. in Petrograd (Mus. Acad. Sci.) in 1897.

Specimens : [84189], 22 grams; [63926], 2 grams.

Karand, v. Veramin.

Karang Modjo, v. Ngawi.

Karavinsky Iron, v. Rancho de la Pila.

Karee Kloof, Hofmeyer, Cape Province, South Africa.

Found about 1914.

Iron. Coarse octahedrite.

A mass of about 203 lb. was found (Director's Report for 1914, Port Elizabeth Museum, p. 4, fig.). Analysed by G. T. Prior (Nature, London, 1922, vol. 110, p. 757), Ni = 8.27% ($n = 11$).

Specimens : [1922,350], a corner piece, 405 grams; [1920,431], 38.6 grams; [1922,351], 14 grams.

Karkh, Jhalawan, Baluchistan, India.

Fell 1905, April 27, 1 p.m.

Stone. Grey chondrite.

After appearance of luminous meteor followed by detonations, two stones at least fell, one below the Sumbaji Hills and another in the Michara Hills: six pieces were recovered, of total weight about 22 kg., the largest (from the Sumbaji Hills) weighing 14½ kg. (L. L. Fermor, Rec. Geol. Surv. India, 1907, vol. 35, p. 85, figs.).

Main masses (21 kg.) in Calcutta (Mus. Geol. Surv. India).

Specimen : [1915,85], eighteen fragments, 226 grams.

Karlsburg, v. Ohaba.

Karthago for Carthago, v. Carthage.

Kathiawar, v. Bherai.

Keithick, v. Strathmore.

Kemis (Mount), v. Krasnojarsk.

Kendall County, Texas, U.S.A.

Known 1887.

Synonym : San Antonio.

Iron. Brecciated hexahedrite.

A mass of about 21 kg. is mentioned by A. Brezina as found in Kendall County and acquired by the Naturhist. Hofmuseum in Vienna (A. Brezina, Ann. Naturhist. Hofmus. Wien, 1887, vol. 2, Notizen, p. 115). Described by E. Cohen and analysed by J. Fahrenhorst (*ibid.*, 1900, vol. 15, p. 382), Ni = 5.64% ($n = 16$).

10½ kg. in Vienna (Naturhist. Mus.).

Specimen : [67015], a slice, 556 grams.

Kenton County, Kentucky, U.S.A.

Found 1889.

Synonym : Independence.

Iron. Medium octahedrite.

A mass of 163 kg. was found on a farm about 8 miles south of Independence (H. L. Pteston, Amer. Journ. Sci., 1892, vol. 44, p. 163). Analysed by J. M. Davison (H. L. Pteston, *l.c.*, p. 164), Ni = 7.65% ($n = 12$).

Over 74 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [71527], a slice, 2520 grams.

Kerills, Mâel Pestivien, Callac, Côtes-du-Nord, France.

Fell 1874, Nov. 26, 10.30 a.m.

Synonyms : Callac; Mâel Pestivien.

Stone. Veined grey chondrite.

After detonations, a stone of about 5 kg. fell (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1880, vol. 91, p. 28).

4 kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [71573], 69 grams; [54634], $5\frac{3}{4}$ grams.

Kermichel, Vannes, Morbihan, France.

Found 1911; perhaps fell 1903, June 30.

Stone. Crystalline chondrite.

A stone of about 3 kg. was ploughed up in 1911 on the farm Kermichel (S. Meunier, *Comptes Rendus Acad. Sci. Paris*, 1912, vol. 154, p. 1739). According to the Marquis de Mauroy, who obtained possession of the mass, a stone was seen to fall, after the usual light and sound phenomena, on June 30, 1903, but was not found at the time (letter of Marquis de Mauroy of May 7, 1912, in Min. Dept., British Museum).

Specimen : [1912,513], 112 grams.

Kernouvé, Morbihan, France.

Fell 1869, May 22, 10 p.m.

Synonyms : Cléguérec; Morbihan; Napoléonville.

Stone. Veined crystalline bronzite-chondrite.

A conical stone of about 80 kg. fell, after detonations and appearance of fire-ball (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1869, vol. 68, p. 1338). Analysed by F. Pisani (*l.c.*, p. 1489), $f = 20$, $n = 13$, $m = 4$.

15 kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [44143], 8020 grams; [43400], 1211 grams; [1920,297], 144 grams.

Kesen, Rikuzen, Japan.

Fell 1850, June 12, 5 a.m.

Synonym : Iwate.

Stone. Spherical hypersthene-chondrite.

A stone of about 135 kg. fell, after detonations (K. Jimbō, T. Wada's *Beiträge Min. Japan*, 1906, no. 2, p. 37; H. A. Ward, *Amer. Journ. Sci.*, 1893, vol. 45, p. 153). Analysed by Kondō (K. Jimbō, *l.c.*, p. 39), $f = 15$ (?), $n = 5\frac{1}{2}$, $m = 2\frac{1}{2}$.

Main mass in Tokyo (Imp. Mus.).

Specimen : [71525], 1280 grams.

Ketschki, v. Ryeckhi.

Khairpur, Bahawalpur State, Punjab, India.

Fell 1873, Sept. 23, 5 a.m.

Synonyms : Bhawalpur (for Bahawalpur); Mailsi; Multan.

Stone. Crystalline enstatite-chondrite.

After the appearance of a cluster of luminous meteors, followed by detonations, a shower of stones fell on both sides of the Sutlej over an

area of 16×3 miles : of six stones preserved in the Indian Museums, three weighed about 11, 10, and 8 lb., and the total weight was about 30 lb. (H. B. Medlicott, Journ. Asiatic Soc. Bengal, 1874, vol. 43, p. 33). Described and analysed by G. T. Prior (Mineral. Mag., 1916, vol. 18, p. 17), $f = 18$, $n = 13$, $m = \infty$, contains oldhamite and daubréchite.

A nearly complete stone of 4.4 kg., and 11 pieces of another stone, weighing together 874 grams, in Calcutta (Mus. Geol. Surv. India).

Specimens : [51366], most of a stone, 3010 grams, and pieces, 154 grams; [51189], a nearly complete stone, 201 grams; [48369], 66 grams. [48369] and [51366] are probably specimens C and E of Medlicott's list (*l.c.*, above).

Khandesh district, v. Bhagur; Manegaon.

Kharkov, Ukraine.

Fell 1787, Oct. 12, 3 p.m.

Synonyms : Bobrik; Charkov; Jigalovka; Lebedin.

Stone. Veined white chondrite.

After detonations, several stones were seen to fall near the villages of Jigalovka and Lebedin; one at least was preserved but its weight is not given (A. Stoikovitz, Ann. Phys. (Poggendorff), 1809, vol. 31, p. 311).

Main mass probably in Kharkov, 932 grams in Petrograd (Mus. Acad. Sci.) in 1897.

Specimen : [19966], 437 grams.

Kheragur, S.E. of Bhurtpur, Agra district, United Provinces, India.

Fell 1860, March 28.

Synonyms : Agra; Bhurtpur; Dhenagur; Khiragurh.

Stone. Spherical chondrite.

A stone (probably of about 1 lb.) is said to have fallen, but no details are given as to phenomena or weight (Proc. Asiatic Soc. Bengal, 1860, vol. 29, p. 212; N. S. Maskelyne, Phil. Mag., 1860, vol. 25, p. 446).

140 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [34799], 353 grams.

Khetri, Shekhawati, Jaipur, Rajputana, India.

Fell 1867, Jan. 19, 9 a.m.

Synonym : Saonlod.

Stone. Brecciated grey bronzite-chondrite.

After detonations, a shower of stones (about 40) fell; they were mostly pounded to powder by the natives, and two fragments only appear to have been preserved (D. Waldie, Journ. Asiatic Soc. Bengal, 1869, vol. 38, p. 252; T. Oldham, Rec. Geol. Surv. India, 1870, vol. 2, p. 101); two stones were of about 13 lb. and $4\frac{1}{2}$ lb. respectively (letter of J. Anderson of Nov. 27, 1868, in Min. Dept., British Museum). Analysed by D. Waldie (*l.c.*, p. 256), $f = 17$, $n = 13\frac{1}{2}$, $m = 4\frac{1}{2}$.

Very little preserved; 49 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [43060], 13 grams.

Khiragurh, v. Kheragur.

Krohar, Banda district, United Provinces, India.

Fell 1910, Sept. 19, 1 p.m.

Stone. Grey spherical chondrite.

After detonations, a stone (perhaps more than one) fell at Khohar village: 22 pieces, varying in weight from 4.8 kg. to 15 grams and of total weight about 9.7 kg., were collected and are preserved in Calcutta (Mus. Geol. Surv. India) (G. de P. Cotter, Rec. Geol. Surv. India, 1912, vol. 42, p. 274).

Specimen: [1915,87], 338 grams.

Khutor Lipowski, v. Lipovsky.

Kiev, v. Bjelaja Zerkov; Oczeretna.

Kijima, v. Fukutomi.

Kikino, Vyazma, Smolensk, Russia.

Fell 1809.

Synonyms: Viasma; Wjasemsk.

Stone. Grey chondrite.

An "ash-coloured" stone fell in the village Kikino, but no particulars of the fall nor weight are recorded (E. von Eichwald, A. Erman's Arch. Wiss. Kunde Russland, Berlin, 1847, vol. 5, p. 177).

Over $\frac{1}{2}$ kg. in Budapest (Hung. Nat. Mus.).

Specimens: [63622], a grey chondrite, 24 grams, and small fragments, 3 grams; [56471], a white chondrite, 1 gram.

Specimen [63622] from the collection of "Taulaubieff" of Petrograd, agrees better with the original description of Eichwald than specimen [56471] from the collection of Y. I. Simashko.

Kilbourn, Columbia County, Wisconsin, U.S.A.

Fell 1911, June 16, 5 p.m.

Stone. Grey chondrite.

After detonations, a stone of 772 grams fell through the roof to the floor of a barn, penetrating two hemlock boards: described by O. C. Farrington (Field Mus. Nat. Hist. Chicago, 1914, Publ. 178, Geol. Ser., vol. 5, no. 1, p. 10, figs.).

68 grams in Chicago (Field Mus. Nat. Hist.).

Specimen: [1919,45], fragments, 1 gram.

Killeter, County Tyrone, Ireland.

Fell 1844, April 29, 3.30 p.m.

Stone. Veined white chondrite.

After appearance of rapidly moving cloud and detonations, a shower of stones fell over several fields, but only a few fragments were preserved (S. Haughton, Phil. Mag., 1862, vol. 23, p. 47, partial analysis; letter of March 20, 1847, of Rev. J. Love of Killeter, in Min. Dept., British Museum).

30 grams in Tübingen University.

Specimens: [90268], 90 grams; [90269], 9 grams; [33963], $2\frac{1}{2}$ grams.

Kinejima for Kijima, v. Fukutomi.

Kingston, Sierra County, New Mexico, U.S.A.

Found 1891.

Iron. Medium octahedrite.

A mass of about 28 $\frac{1}{2}$ lb. was found near the Solitary Mine, Percha Creek, 4 miles north of Kingston: described by E. O. Hovey and analysed by

the firm of Booth, Garrett and Blair (Ann. New York Acad. Sci., 1912, vol. 22, p. 335), Ni = 6.98% ($n = 13$).

Specimen : [1912,595], a slice, 360 grams.

Kiowa County, v. Brenham.

Kirghiz Steppes, v. Karakol.

***Kissij**, Chistopol, Kazan, Russia.

Found 1899.

Stone. Black chondrite.

A stone of about $5\frac{1}{2}$ kg. was ploughed up and was preserved in the Geol. Inst. Kazan Univ. (A. Stuckenberg, Sitz-Prot. Naturfor.-Gesell. Kazan, 1900-1, vol. 32, no. 188; Abst. in Neues Jahrb. Min., 1903, Bd. 1, p. 212).

420 grams in Chicago (Field Mus. Nat. Hist.), 21 grams in Prague (Bohemian Mus.).

Kitano, v. Gifu.

Klausenburg, v. Moqs.

Klein-Menow, v. Menow.

Klein-Wenden, Nordhausen, Erfurt, Germany.

Fell 1843, Sept. 16, 4.45 p.m.

Stone. Crystalline chondrite.

A stone of about $3\frac{1}{2}$ kg. fell, after detonations (Ann. Phys. (Poggendorff), 1843, vol. 60, p. 157). Analysed by C. Rammelsberg (*ibid.*, 1844, vol. 62, p. 449).

$2\frac{1}{2}$ kg. in Berlin University.

Specimen : [35404], $5\frac{1}{2}$ grams.

Klondike, Yukon, Canada.

Found 1901.

Synonyms : Big Skookum, Dawson, Gay Gulch, Skookum Gulch.

Iron. Nickel-rich ataxite.

One mass of 483 grams was found in *Gay Gulch*, Bonanza Creek, in 1901, and another of about 16 kg. in Pliocene gravels in *Skookum Gulch*, 10 miles distant : the two masses give similar etching effects and in all probability belong to one fall (R. A. A. Johnston, Mus. Bull. Geol. Surv. Canada, 1915, no. 15 (Geol. Ser., no. 26), pp. 1-8, 11 pls., and map). Skookum Gulch analysed by J. E. Whitfield (*l.c.*), Ni = 18.20% ($n = 4\frac{1}{2}$).

Main masses in Ottawa (Mus. Geol. Surv. Canada).

Specimen : [1919,43], a slice of Skookum, $362\frac{1}{2}$ grams.

Knasta, v. Bialystok.

Knoxville, v. Tazewell.

Knyahinya, Nagy-Bereszna, Ungvar, Czechoslovakia.

Fell 1866, June 9, 5 p.m.

Stone. Grey hypersthene-chondrite.

After appearance of fire-ball and detonations, a shower of stones (estimated at over 1000, and of total weight of about 500 kg., the largest weighing about 293 kg.) fell over an area of $2 \times \frac{3}{4}$ mile (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien. Math.-naturwiss. Kl., 1866, vol. 54, Abt. 2, pp. 200, 475, figs. of stones and fire-ball). Analysed by E. H. von Baumwauer (Arch. Néerland. Sci. Nat. Haarlem, 1872, vol. 7, p. 146), $f = 5$, $n = 4$, $m = 2\frac{1}{2}$.

The largest stone (293 kg.) in Vienna (Naturhist. Mus.), 47 kg. in Budapest (Hung. Nat. Mus.).

Specimens: thirteen complete stones—[52213], 6465 grams; [40581], 4039 grams; [51606], 255 grams; [41647], 230 grams; [41646], 227½ grams; [41648], 80½ grams; [41649], 38½ grams; [41650], 17 grams; [42262], 16 grams; [41651], 11 grams; [41653], 2½ grams; [51605], two small stones, 2½ grams.

Kodaikanal, Palni Hills, Madura district, Madras, India.

Found 1898; perhaps fell 8 years before.

Iron. Fine octahedrite, brecciated.

A mass of about 35 lb. was found (T. H. Holland, Proc. Asiatic Soc. Bengal, 1900, Jan., p. 2). Described by F. Berwerth (Tschermaks Min. Petr. Mitt., 1906, vol. 25, p. 179); the supposed new mineral, "Weinbergerite," in the inclusions appears to be oligoclase (having refraction slightly less than 1.55 and showing twin-striations) mixed with oxide of iron and a little pyroxene, and the figures of the analyses agree with such a mixture (G. T. Prior).

84½ kg. in Calcutta (Mus. Geol. Surv. India), 844 grams in Paris (Mus. d'Hist. Nat.).

Specimens: [85485], 2355 grams; [1920,310], a slice, 193 grams.

Kokomo, Howard County, Indiana, U.S.A.

Found 1862.

Synonym: Howard County.

Iron. Nickel-rich ataxite.

A mass of about 4 lb. was found at a depth of about 2 ft. (E. T. Cox, Amer. Journ. Sci., 1873, vol. 5, p. 155, and J. L. Smith, *ibid.*, 1874, vol. 7, p. 391). Analysed by O. Sjöström (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 152), Ni = 15.76% ($n = 5$).

Only 655 grams (418 in Harvard University) known in Collections.

Specimens: [50807], 38 grams; [47240], 7½ grams.

Kokstad, Griqualand East, Cape Province, South Africa.

Found 1884.

Iron. Medium octahedrite.

A mass of 43 kg., of jaw-bone shape, was brought into Kokstad at the same time as the large Matatiela iron (E. Cohen, Ann. South African Mus. Cape Town, 1900, vol. 2, p. 9, 3 pls.). Described by E. Cohen and analysed by J. Fahrenhorst (*l.c.*, p. 13), Ni = 8.01% ($n = 11$). Possibly identical with Matatiela, though the two irons differ somewhat in etched characters.

Main mass in Vienna (Naturhist. Mus.).

Specimen: [80675], 203 grams.

Kolapara, v. Dokachi.

Kolotscha, v. Borodino.

Konia, v. Adalia.

Kossuth County, v. Forest City.

Köstritz, v. Pohlitz.

Kota-Kota, Marimba district, Lake Nyasa, British Central Africa.

Known before 1905.

Synonym: Marimba district.

Stone. Spherical chondrite.

A large stone was said by natives to have fallen near their villages some years previously to 1905 and was held as sacred; a nearly complete stone

of 333 grams (but described by natives as part of the large stone) was brought to Mr. A. J. Swann, the magistrate of the Marimba district: described by G. T. Prior (Mineral. Mag., 1914, vol. 17, p. 129).

Specimen: [1905,355], a nearly complete stone, 333 grams.

Kotschki, v. Ketschki.

Kouga Mountains, Humansdorf district, Cape Province, South Africa.

Known before 1916.

Iron. Medium octahedrite.

A mass of 2586 lb. was found at Joubert's Kraal (letter of L. Peringuey of Jan. 7, 1916, in Min. Dept., British Museum).

Main mass in Cape Town (South African Mus.).

Specimen: [1916,60], a slice, 297 grams.

Koursk, v. Kursk.

Krähenberg, Zweibrücken, Rhenish Bavaria.

Fell 1869, May 5, 6.30 p.m.

Synonym: Zweibrücken.

Stone. Intermediate hypersthene-chondrite (howarditic chondrite of Brezina).

After appearance of cloud and detonations, a stone of about 16½ kg. fell (Ann. Phys. (Poggendorff), 1869, vol. 137, pp. 176, 328, 617). Analysed by G. vom Rath (*ibid.*, p. 335), $f = 3\frac{1}{2}$, $n = 5$, $m = 2$. Described by G. Neumayer (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1869 (1870), vol. 60, Abt. 2, p. 229).

Main mass in Speyer Museum.

Specimens: [85237], 7½ grams; [1920,311], 1.8 grams; [43061], 1½ grams.

Krähenholz, v. Barnttrup.

Krakhut, v. Benares.

Krasnoi-Ugol, Ryazan, Russia.

Fell 1829, Sept. 9, 2 p.m.

Stone. Spherical chondrite.

After detonations, seven stones were said to have fallen, but only two were found (Ann. Phys. (Poggendorff), 1829, vol. 17, p. 379).

Main mass (2½ kg.) in Petrograd (Mus. Acad. Sci.) in 1897.

Specimen: [35184], 5 grams.

Krasnojarsk, Yeniseisk, Siberia.

Found 1749.

Synonyms: Emir (Mount); Kemis (Mount); Medwedewa; Pallas Iron.

Stony-iron. Pallasite.

A mass estimated at about 700 kg. was discovered in 1749 about 145 miles south of Krasnojarsk between the Ubei and Sisim rivers; it was seen by P. S. Pallas in 1772, and was transported to Krasnojarsk (P. S. Pallas, Reise Russ. Reichs, St. Petersburg, 1776, vol. 3, p. 411; A. Göbel, Bull. Acad. Sci. St.-Petersbourg, 1867, vol. 10, p. 305). Analysed by J. J. Berzelius (Ann. Phys. (Poggendorff), 1834, vol. 33, p. 123), Ni = 10.73% ($n = 8\frac{1}{2}$), m of olivine = 7; and recently by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 12), Ni = 9.52% ($n = 9\frac{1}{2}$), $m = 5\frac{1}{2}$. The crystallographic characters of the olivine described by N. I. Koksharov, with chemical analysis by N. M. Leuchtenberg (Mém. Acad. Sci. St.-Petersbourg, 1870, vol. 15, no. 6).

Main mass (520 kg.) in Petrograd (Mus. Acad. Sci.) in 1897.

Specimens : [90234], 2865 grams; [90235], 259 grams; [36604(2)], 241½ grams; [46982], 31 grams; [1911,719], 16 grams; [36603(1)], ½ gram.

Krasnojarsk (iron), v. Toubil River.

Krasnoslobodsk, v. Novo-Urei.

Krasnoyarsk, v. Krasnojarsk.

Krawin, v. Tabor.

Kroonstad, v. Cronstad.

Kruki } v. Brahın.

Krukov }

Kuleschovka, Poltava, Ukraine.

Fell 1811, March 12, 11 a.m.

Synonym : Poltava (of G. von Blöde).

Stone. Veined white chondrite.

A stone of over 6 kg. fell, after detonations (Ann. Phys. (Gilbert), 1811, vol. 38, p. 120; A. Göbel, Bull. Acad. Sci. St.-Petersbourg, 1867, vol. 11, p. 242).

4 kg. in Petrograd (Mus. Acad. Sci.) in 1897.

Specimens : [44774], 32 grams; [36610(8)], 9½ grams; [44775], 9 grams; [90258], 7½ grams.

***Kulnine Run**, Victoria, Wentworth, New South Wales.

Known 1886.

Stony-iron (?).

A mass of 122 lb. in the South Australian Museum, Adelaide. Cast in the British Museum Collection.

Kurla, v. Pillistfer.

Kursk, v. Botschetschki; Sevrukovo.

Kusiali, Kumaon, United Provinces, India.

Fell 1860, June 16, 5 a.m.

Stone. White chondrite.

After detonations, a stone fell on hard rock and was shattered; only a few small fragments were preserved (N. S. Maskelyne, Phil. Mag., 1864, vol. 28, p. 148).

Specimen : [35732], 4 grams.

Kuttayi, v. Kuttippuram.

Kuttippuram, Ponnani taluq, Malabar district, Madras, India.

Fell 1914, April 6, about 7 a.m.

Synonym : Kuttayi.

Stone. Veined white chondrite.

After detonations, a shower of stones fell over four villages : the total weight was about 100 lb. and the largest stone, which fell in Kuttippuram, weighed about 71 lb. : described by J. Coggin Brown (Rec. Geol. Surv. India, 1915, vol. 45, p. 209, 9 pls.).

38 kg., including the largest stone (in three pieces), in Calcutta (Mus. Geol. Surv. India).

Specimens : [1915,88], 725 grams; [1914,1420], 25 grams.

Kyushu, Japan.

Fell 1886, Oct. 26, 3 p.m.

Synonyms: Hishikari; Maêmê; Oguchimura; Ōshima; Oynchimura; Satsuma; Shigetome; Yamanomura; Yenshigahara.
Stone. Veined white chondrite.

After detonations, a shower of stones fell in the southern part of Kyushu in the provinces of Satsuma and Ōsumi: the largest weighed about 29 kg., the smaller were described as "innumerable" (K. Jimbō, T. Wada's *Beiträge Min. Japan*, 1906, no. 2, p. 43; and T. Hiki, *ibid.*, no. 4, p. 143, figs.).

Two complete stones in Tokyo (Imp. Mus.).

Specimens: [80031], the largest complete stone, "Yenshigahara," 28,803 grams ($63\frac{1}{2}$ lb.); [76809], "Oynchimura," a nearly complete stone, 2430 grams; [1905,67], "Ōshima," 81 grams; [1905,68], "Shigetome," $34\frac{1}{2}$ grams; [68213], "Ōshima," $5\frac{3}{4}$ grams.

La Baffe, v. Epinal.

La Bécasse, Dun le Pöelier, Indre, France.

Fell 1879, Jan. 31, noon.

Synonym: Bécasse.

Stone. White chondrite.

After detonations, a stone of 2.8 kg. was seen to fall (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1879, vol. 89, p. 597).

Main mass ($2\frac{1}{2}$ kg.) in Paris (Mus. d'Hist. Nat.).

Specimen: [56467], $19\frac{1}{2}$ grams.

La Bella Roca, v. Bella Roca.

Laborel, Drôme, France.

Fell 1871, June 14, 8 p.m.

Stone. Intermediate chondrite.

Two stones, one of about 2 kg. and the other of 91 grams, appear to have fallen, but were not discovered (or made known) until 1895 (E. Cohen, *Ann. Naturhist. Hofmus. Wien*, 1896, vol. 11, p. 31; E. A. Wülfing, *Die Meteoriten in Sammlungen*, Tübingen, 1897, p. 193). Described by E. Cohen (*l.c.*). The specimen in the British Museum does not appear to be brecciated (G. T. Prior).

Over $\frac{3}{4}$ kg. in Grenoble (Faculté des Sciences).

Specimen: [80999], $291\frac{1}{2}$ grams.

La Caille, Grasse, Alpes Maritimes, France.

Recognised 1828.

Synonyms: Caille; Grasse.

Iron. Medium octahedrite.

A mass of about 625 kg. for about two centuries was used as a seat in front of the church of La Caille: it was recognised as meteoric in 1828 by Brard, who states that it had been brought from the mountain of Audoubert about 6 miles S.E. of La Caille (— Brard, *Séances Publiques Acad. Sci. Bordeaux*, 1829, p. 39; and G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1867, vol. 64, p. 633). Analysed by J. Boussingault (*ibid.*, 1872, vol. 74, p. 1287), Ni = 9.83% ($n = 9$).

Main mass in Paris (Mus. d'Hist. Nat.).

Specimens: [35725], 374 grams; [35161], 5 grams.

La Calle, v. Feid Chair.

***La Charca, Irapuato, Guanajuato, Mexico.**

Fell 1878, June 11, 11.30 a.m.

Synonyms: Charca; Irapuato.

Stone. Chondrite.

A stone of 399 grams fell 5 miles from Irapuato (A. Castillo, *Cat. Météorites Mexique*, Paris, 1889, p. 13).

The stone is said to be in the College of Guanajuato.

La Encantada, v. Imilac.

La Grange, Oldham County, Kentucky, U.S.A.

Found 1860.

Synonym: Oldham County.

Iron. Fine octahedrite.

A mass of 112 lb. was found (J. L. Smith, *Amer. Journ. Sci.*, 1861, vol. 31, p. 265). Analysed by J. L. Smith (*l.c.*, p. 266), and by O. Bürger (*E. Cohen, Meteoritenkunde*, 1905, Heft 3, p. 358), Ni = 7.81% and 7.61% respectively, ($n = 12$).

85 lb. in Amherst College.

Specimens: [34580a], 157½ grams; [34580], 59 grams.

La Grange, v. Bluff.

L'Aigle, Orne, France.

Fell 1803, April 26, 1 p.m.

Synonyms: Aigle; Ober-Pfalz; Waldau.

Stone. Brecciated intermediate hypersthene-chondrite.

After appearance of a fire-ball, followed by detonations, a shower of stones, estimated at 2000-3000 in number and of aggregate weight of about 37 kg., the largest weighing about 9 kg., fell within an area of $6 \times 2\frac{1}{2}$ miles: the detailed report of the phenomena by J. B. Biot first established beyond doubt the fact of the fall of stones from outer space (J. B. Biot, *Mém. Institut. France*, 1806, vol. 7, *Histoire*, p. 224; and *Ann. Phys.* (Gilbert), 1804, vol. 16, p. 44). Described by H. Pfahler (*Tschermaks Min. Petr. Mitt.*, 1892, vol. 13, p. 362). Analysed by E. H. von Baumhauer (*Arch. Néerland. Sci. Nat. Haarlem*, 1872, vol. 7, p. 154), $f = 8$, $n = 5\frac{1}{2}$.

8½ kg. in Paris (*Mus. d'Hist. Nat.*), 4 kg. in Vienna (*Naturhist. Mus.*).

Specimens: [90248], a complete stone, 1018 grams; [90251-2], two pieces of 105 grams and 225 grams forming a complete stone; [33900], 258 grams; [33182], a piece, 152 grams, and a complete stone, 145 grams; [33901], 141 grams; [90249], 140 grams; [90250], a complete stone, 17½ grams.

Laissac, v. Favars.

Lakangaon, Nimar, Indore, Central India.

Fell 1910, Nov. 24, 6 p.m.

Synonym: Lapangaon.

Stone. Eucrite.

After appearance of flash of light, followed by trail of smoke and detonations, a stone fell, portions of which weighing 125 grams and 87½ grams were collected (G. de P. Cotter, *Rec. Geol. Surv. India*, 1912, vol. 42, p. 275).

116 grams in Calcutta (*Mus. Geol. Surv. India*).

Specimen: [1915.142], 93.8 grams.

***Lake Brown, County Carnarvon, Western Australia.**

Found 1919.

Stone. Intermediate chondrite (?).

A stone of 2½ lb. was found (Ann. Rep. Geol. Surv. Western Australia for 1921, 1922, p. 53).

Main mass in Perth, Western Australia (Geol. Surv. Mus.).

*Lake Giles, v. Mount Dooling.***Lalitpur, Lalitpur district, United Provinces, India.**

Fell 1887, April 7, 10.30 a.m.

Synonyms: Iharaota; Jharaota.

Stone. Veined intermediate chondrite (howarditic chondrite of Brezina).

After detonations, a stone was seen to fall and break into pieces, eight of which, weighing 372 grams, were recovered (F. R. Mallet, Rec. Geol. Surv. India, 1887, vol. 20, p. 153). As the British Museum specimen is a nearly complete stone, two stones at least appear to have fallen (G. T. Prior).

128 grams of the larger stone in Calcutta (Mus. Geol. Surv. India).

Specimen: [63058], a nearly complete stone, 79½ grams.

Lampa, Sierra de Chicauma, Atacama, Chile.

Found before 1905.

Stone. Crystalline chondrite.

A mass of 6½ lb., obtained from H. A. Ward, was described by O. C. Farrington (Field Columbian Mus. Chicago, 1907, Publ. 122, Geol. Ser., vol. 3, no. 6, p. 115). Except that it is more oxidized, in characters it is very similar to Cobija, and may be identical with it since the information as to locality was obtained not from H. A. Ward but indirectly from the School of Mines, Santiago (G. T. Prior).

Specimen: [1910,120], 216 grams.

*Lancashire, v. Appley Bridge.****Lancaster County, Nebraska, U.S.A.**

Known 1903.

Iron.

A mass of 13 kg. was received by the Nebraska Geol. Surv. in 1903 (E. H. Barbour, Rep. Geol. Surv. Nebraska, Lincoln, 1903, vol. 1, p. 184). Present repository not known.

Lancé, Vendôme, Loir-et-Cher, France.

Fell 1872, July 23, 5.20 p.m.

Synonyms: Authon; Orleans.

Stone. Spherical carbonaceous chondrite.

After appearance of fire-ball (moving from S.W. to N.W.), and detonations, a shower of stones fell, of which six were recovered; the total weight was about 51½ kg. and the largest stone weighed 47 kg. (L. M. de Tastes, Comptes Rendus Acad. Sci. Paris, 1872, vol. 75, p. 273; and G. A. Daubrée, *ibid.*, pp. 308, 465, 505, and 1874, vol. 79, p. 277). Described by R. von Drasche (Tschermaks Min. Mitt., 1875, p. 1, 4 pls.). Partial analysis by G. A. Daubrée (*l.c.*, 1872, vol. 75, p. 465).

The largest stone (47 kg.) in Vienna (Naturhist. Mus.), about 1½ kg. in Paris (Mus. d'Hist. Nat.).

Specimens: [48707], a complete stone, 297½ grams; [1920,312], 54 grams; [48756], 34½ grams.

Lançon, Bouches-du-Rhone, France.

Fell 1897, June 20, 8.30 p.m.

Stone. Veined intermediate chondrite.

After the usual light and sound phenomena, a stone (or stones) fell, of total weight probably of about 7 kg. (the De Mauroy Collection in 1909 contained 5.8 kg., the largest piece weighing 4.4 kg.): described and partially analysed by S. Meunier (*Comptes Rendus Acad. Sci. Paris*, 1900, vol. 131, p. 969).

Nearly $\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat.).

Specimens: [83631], 199 $\frac{1}{2}$ grams; [1920,313], two fragments, 1 gram.

Landes, v. Barbotan.*Langenpiernitz*, v. Stannern.*Langres*, v. Chassigny.***Langwarrin**, County Mornington, Victoria, Australia.

Found 1886.

Iron.

A mass of 17 $\frac{1}{2}$ cwt. (891 kg.) is in the National Museum, Melbourne (C. Anderson, *Rec. Australian Mus. Sydney*, 1913, vol. 10, p. 60). Perhaps identical with Cranbourne.

Lapangaon, v. Lakangaon.*La Paz*, v. Colorado River.**La Primitiva**, Santa Catalina, Desert of Tarapaca, Chile.

Found 1888.

Synonyms: *Angela*; *Oficina Angela*; *Primitiva*; *Salitra*.

Iron. Nickel-poor ataxite.

A mass of 6-8 lb. was found by a native near the nitrate works of La Primitiva in 1888 (E. E. Howell, *Proc. Rochester Acad. Sci.*, 1890, vol. 1, p. 100). In 1903 a mass of 4 kg. was found embedded in "caliche" at the *Angela Nitrate Co.* works about 12 miles from La Primitiva, and in 1906 and 1911 two other masses, of 1 $\frac{1}{2}$ kg. and 4.3 kg. respectively, from the same locality were sent to the British Museum (G. T. Prior, *Mineral. Mag.*, 1914, vol. 17, p. 131). The Primitiva iron has been described by E. Cohen and analysed by O. Sjöström (*Ann. Naturhist. Hofmus. Wien*, 1897, vol. 12, Abt. 2, p. 122), Ni = 4.72% ($n = 20$); the Angela iron by G. T. Prior (*l.c.*), Ni = 4.52% ($n = 21$).

175 grams of La Primitiva in Vienna (*Naturhist. Mus.*).

Specimens: of *Angela*, three pieces—[1911,141], 4285 grams; [86831], 4050 grams; [1906,21], 1235 grams: of *La Primitiva*, two slices—[1920,314], 118 grams; [84194], 78 grams.

Laramie County, v. Silver Crown.*La Rochelle*, v. Chantonay; Esnandes.*Lasdany*, v. Lixna.*La Touanne*, v. Charsonville.**Launton**, Bicester, Oxfordshire, England.

Fell 1830, Feb. 15, 7.30 p.m.

Stone. Veined intermediate hypersthene-chondrite.

After appearance of fire-ball followed by a triple detonation, a stone of 2 lb. 5 oz. was seen to fall (W. Stone, *Mag. Nat. Hist.*, London, 1831, vol. 4,

p. 139). Described and analysed by G. T. Prior (Mineral. Mag., 1916, vol. 18, p. 2). $f = 8\frac{1}{2}$, $n = 6$, $m = 3\frac{1}{2}$.

Specimen : [77528], the nearly complete stone, 998 grams, and a fragment, 3 grams.

Laurens County, South Carolina, U.S.A.

Found 1857.

Synonym : Laurens Court House.

Iron. Fine octahedrite.

A mass of $4\frac{3}{4}$ lb. was found in the north-western corner of Laurens County : described by W. E. Hidden and analysed by J. B. Mackintosh (Amer. Journ. Sci., 1886, vol. 31, p. 463), $Ni = 13.34\%$ ($n = 6\frac{1}{2}$).

$1\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.).

Specimen : [67448], $61\frac{1}{2}$ grams.

Laurens Court House, v. Laurens County.

La Vivionnière, v. Le Teilleul.

Lea Iron, v. Cleveland.

Leavenworth County, v. Tonganoxie.

Lebedin, v. Kharkov.

Leeuwfontein, Engelbrecht drift, Pretoria, Transvaal, South Africa.

Fell 1912, June 21, 2 p.m.

Stone. Intermediate hypersthene-chondrite.

After detonations a stone of 460 grams was seen to fall (G. T. Prior, Nature, London, 1922, vol. 110, p. 757).

Specimen : [1922,769], 135 grams.

***Lefroy**, County Dorset, Tasmania.

Found 1904.

Iron.

A minute piece of 3.3 grains was found in alluvial drift 27 miles N.W. of Launceston (W. F. Petterd, Proc. Roy. Soc. Tasmania, 1910, p. 98).

In the possession of Mrs. W. F. Petterd, Launceston, Tasmania, in 1913.

***Le Gould's stone**, Leichhardt district, Queensland.

Found before 1864.

Stone.

A stone, 10 in. in diameter, which in its fall had broken a tree, was found two days' march beyond the Isaacs River (L. Le Gould, Geol. Mag., 1864, vol. 1, p. 142).

Leighton, Colbert County, Alabama, U.S.A.

Fell 1907, Jan. 12, 8 p.m.

Stone. Brecciated grey chondrite.

After appearance of fire-ball and detonations, a stone of 877 grams was seen to fall 8 miles south of Leighton : described by O. C. Farrington and partially analysed by H. W. Nichols (Field Mus. Nat. Hist. Chicago, 1910, Geol. Ser., Publ. 145, vol. 3, no. 8, p. 165).

Main mass in Chicago (Field Mus. Nat. Hist.).

Specimens : [1910,454], a slice, $91\frac{1}{2}$ grams.

Leland, v. Forest City.

***Lenarto**, Sáros, Czechoslovakia.

Found 1814.

Synonyms : Polen (of J. J. Berzelius); Sáros.

Iron. Medium octahedrite.

A mass of 108½ kg. was found on one of the highest summits of the Carpathians (— Tehel, Ann. Phys. (Gilbert), 1815, vol. 49, p. 181). Analysed by J. Boussingault (Comptes Rendus Acad. Sci. Paris, 1872, vol. 74, p. 1288), Ni = 8.58% ($n = 10\frac{1}{2}$). Occluded gases examined by T. Graham (Proc. Roy. Soc. London, 1867, vol. 15, p. 502).

76½ kg. in Budapest (Hung. Nat. Mus.), nearly 3½ kg. in Tübingen University, 3½ kg. in Vienna (Naturhist. Mus.).

Specimens : [61305], 1570 grams; [61304], 250 grams; [90220], 198 grams.

Lenorka, v. Leonovka.

***Leonovka**, Poltava, Ukraine.

Fell 1902.

Synonym : Lenorka.

Stone. White chondrite.

The main mass is said to be in Kiev Museum (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 50).

***Le Pressoir**, Indre-et-Loire, France.

Fell 1845, Jan. 25, 3 p.m.

Synonym : Louans.

Stone. Spherical chondrite.

After detonations, a stone of about 3 kg. was found next day (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1881, vol. 92, p. 984).

101 grams in Paris (Mus. d'Hist. Nat.).

Lerici, v. Pultusk.

Les Ormes, Yonne, France.

Fell 1857, Oct. 1, 5 p.m.

Synonyms : Commune des Ormes; Ormes.

Stone. White chondrite.

After appearance of fire-ball and detonations, a stone was seen to fall, of which a piece weighing 125 grams was presented to the French Academy (L'Institut, Paris, 1857, vol. 25, p. 363). Described and partially analysed by S. Meunier (Bull. Soc. Hist. Nat. Autun, 1892, vol. 5, p. 335). The entry in the Register of the British Museum specimen states that the stone, weighing about 1 lb., fell in the "hameau des Touchards."

94 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [27363], 12 grams.

Lesves, Namur, Belgium.

Fell 1896, April 13, 7.30 a.m.

Stone. Grey chondrite.

After detonations, a stone of about 2 kg. was seen to fall (Nature, London, 1896, vol. 53, p. 611). Described by A. F. Renard and partially analysed by F. Stöber (Bull. Acad. Roy. Belgique, 1896, vol. 31, p. 654).

Specimen : [81535], 56½ grams.

Le Teilleul, Manche, France.

Fell 1845, July 14, 3 p.m.

Synonyms : La Vivionnière; Teilleul; Vivionnière.

Stone. Howardite.

After detonations, a stone of 780 grams fell: described by G. A. Daubrée and partially analysed by — Sorel (*Comptes Rendus Acad. Sci. Paris*, 1879, vol. 88, p. 544).

$\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat. and École des Mines).

Specimen: [56464], 2 grams.

Lexington County, South Carolina, U.S.A.

Found 1880.

Iron. Coarse octahedrite.

A mass of 10½ lb. was found on a farm: described by C. U. Shepard and analysed by C. U. Shepard, junr. (*Amer. Journ. Sci.*, 1881, vol. 21, p. 117), Ni = 6.08% ($n = 15$).

2.8 kg. in the Shepard Collection in Washington (U.S. Nat. Mus.).

Specimens: [63629], a slice, 201½ grams; [54278], a slice, 70 grams.

*Lexington County, v. Ruff's Mountain.**Libonnez, v. Juvinas.**Liboschitz, v. Ploshkovitz.***Lick Creek, Davidson County, North Carolina, U.S.A.**

Found 1879.

Iron. Hexahedrite.

A mass of 1.24 kg. was found: described by W. E. Hidden and analysed by J. L. Smith and J. B. Mackintosh (*Amer. Journ. Sci.*, 1880, vol. 20, p. 324), Ni = 5.74% ($n = 16$).

Nearly 1 kg. in Vienna (Naturhist. Mus.).

Specimen: [55124], a slice, 19 grams.

Lime Creek, Claiborne, Monroe County, Alabama, U.S.A.

Found 1834.

Synonyms: Alabama; Claiborne; Clarke County; Limestone Creek.

Iron. Nickel-rich ataxite.

A mass, "of irregular triangular shape 10 in. long by 5 or 6 in. in thickness," was found: described and analysed by C. T. Jackson, who, in this meteorite, was the first to record the presence of chloride of iron in meteoric irons (*Amer. Journ. Sci.*, 1838, vol. 34, p. 332). Analysed later by R. Knauer confirming Jackson's results (E. Cohen, *Meteoritenkunde*, 1905, Heft 3, p. 131), Ni = 29.99% ($n = 2$).

Repository of the main mass unknown.

Specimens: [35964], 15½ grams; [34583], 3½ grams.

*Lime Creek, v. Walker County.***Limerick County, Ireland.**

Fell 1813, Sept. 10, 9 a.m.

Synonyms: Adare; Faha.

Stone. Veined grey bronzite-chondrite.

A shower of stones fell after detonations, one of 17 lb. at Scagh, several smaller ones near *Adare*, one of 65 lb. at Brasky, and another of 24 lb. at *Faha* (S. Maxwell, *Phil. Mag.*, 1818, vol. 51, p. 355). Analysed by G. T. Prior (*Mineral. Mag.*, 1921, vol. 19, p. 167), $f = 18$, $n = 11$, $m = 4\frac{1}{2}$.

8½ kg. in Oxford University, 1 kg. in Tübingen University.

Specimens : [33910a], 82 grams; [1907,15], 47 grams; [46973], 21 grams.

Limestone Creek, v. Lime Creek.

Lincoln County, v. Petersburg.

Linn County, v. Marion.

Linnville, v. Linville.

Linnville Mountain, v. Linville.

Linum, Fehrbellin, Brandenburg, Germany.

Fell 1854, Sept. 5, 8 p.m.

Synonyms : Brandenburg; Fehrbellin.

Stone. White chondrite.

After detonations, a stone of 1862 grams fell (G. Rose, Ann. Phys. (Poggendorff), 1855, vol. 94, p. 169). Analysed by A. Lindner (Sitzungsber. Akad. Wiss. Berlin, 1904, p. 144).

1½ kg. in Berlin University.

Specimen : [86639], 2 grams.

Linville Mountain, Burke County, North Carolina, U.S.A.

Found 1882.

Synonyms : Burke County; Linnville; Linnville Mountain.

Iron. Nickel-rich ataxite.

A mass of 442 grams was found on Linville Mountain (G. F. Kunz, Amer. Journ. Sci., 1888, vol. 36, p. 275). Described by E. Cohen and analysed by O. Sjöström (Ann. Naturhist. Hofmus. Wien, 1898, vol. 13, p. 145), Ni = 18.32% ($n = 5$).

Nearly ½ kg. in Vienna (Naturhist. Mus.).

Specimen : [67449], 21 grams.

Lion River, v. Bethany.

Liponnas, v. Luponnas.

Lipovitz, v. Oczeretna.

***Lipovsky**, Ust-Medvyeditsk, Region of the Don Cossacks, Russia.

Known 1904.

Synonym : Khutor Lipowski.

Stony-iron. Pallasite.

A mass of about 3½ kg. was found : described by P. N. Chirvinsky, with analysis of the iron by M. Lapin (Centralblatt Min., 1922, p. 35), Ni = 7.78%.

Lippe, v. Barntrup.

Liptó, v. Nagy-Boróv.

Lissa, Bunzlau, Bohemia.

Fell 1808, Sept. 3, 3.30 p.m.

Synonyms : Bunzlau; Lysá.

Stone. Veined white chondrite.

After detonations, four (perhaps five) stones fell, two at Wustra and two at Strataw : the total weight of the four stones was about 10.4 kg., the largest stone weighing about 3 kg. (K. von Schreibers, Ann. Phys. (Gilbert), 1808, vol. 30, p. 358; M. Reuss, Ann. Chim. Phys., Paris, 1810, vol. 74, p. 84).

4½ kg. in Tübingen University, 3 kg. (complete stone) in Vienna (Naturhist. Mus.).

Specimens: [76154], 147 grams; [35180], 11½ grams; [33732], 10½ grams; [1920,315], 3 grams.

Little Miami Valley, v. Anderson.

Little Piney, Pulaski County, Missouri, U.S.A.

Fell 1839, Feb. 13, 3.30 p.m.

Synonyms: Jefferson City; Missouri; Pine Bluff; Pulaski County.

Stone. Spherical chondrite.

After appearance of a luminous meteor followed by detonations, a stone of about 50 lb. which had struck an oak-tree was found 2 miles from Pine Bluff and 10 miles from Little Piney (E. C. Herrick, Amer. Journ. Sci., 1839, vol. 37, p. 385; C. U. Shepard, *ibid.*, 1848, vol. 6, p. 407).

Only about 400 grams known in collections, 75 grams in Washington (U.S. Nat. Mus.).

Specimen: [24005], 104 grams.

Livingston County, v. Smithland.

Lixna, Dvinsk (= Daugavpils, Dünaburg), Latvia.

Fell 1820, July 12, 5.30 p.m.

Synonym: Lasdany.

Stone. Veined grey bronzite-chondrite.

After appearance of a fire-ball (moving from S. to N.), and detonations, a stone of about 40 lb. was seen to fall at the village of Lasdany; other stones fell in water and were not recovered (J. von Grotthuss, Ann. Phys. (Gilbert), 1821, vol. 67, p. 337; A. Laugier, *ibid.*, 1823, vol. 75, p. 264). Described and analysed by A. Kuhlberg (Arch. Naturk. Liv-, Ehst- u. Kurlands, Ser. 1, Min. Wiss. Dorpat, 1867, vol. 4, pp. 23, 33), $f = 15$, $n = 8$, $m = 4$).

In 1897, 2½ kg. in Kiev University, 399 grams in Dorpat University.

Specimens: [1920,316], 77 grams; [54642], 53 grams; [33735], 5½ grams.

Ljungby, v. Lundsgård.

Elano del Inca, v. Vaca Muerta.

Lockport, v. Cambria.

Locust Grove, Henry County, Georgia, U.S.A.

Found 1857.

Synonym: Henry County.

Iron. Nickel-poor ataxite.

A mass of 10 kg. was found three days after the appearance of a luminous meteor on July 26, 1857: described by E. Cohen with analysis by O. Sjöström (Sitzungsber. Akad. Wiss. Berlin, 1897, p. 76, and Meteoritenkunde, 1905, Heft 3, p. 44), Ni = 5.57% ($n = 17$).

597 grams in Chicago (Field Mus. Nat. Hist.).

Specimens: [82773], a slice, 365 grams; [1920,317], a slice, 206 grams.

Lodhran, v. Lodran.

Lodran, Multan, Punjab, India.

Fell 1868, Oct. 1, 2 p.m.

Synonyms: Lodhran; Mooltan; Multan.

Stony-iron. Lodranite.

After detonations, a stone fell 12 miles east of Lodran, and a portion of about 1 kg. was preserved (T. Oldham, Rec. Geol. Surv. India, 1869, vol. 2, p. 20). Described and analysed by G. Tschermak (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1870, vol. 61, Abt. 2, p. 465), m of olivine = 7, m of pyroxene = 5. Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 353), $f = 30$, $n = 11\frac{1}{2}$.

690 grams in Calcutta (Mus. Geol. Surv. India).

Specimen: [44003], 56 grams.

*Logrono, v. Barea.**Loket, v. Elbogen.**Loma de la Cosina, v. Cosina.***Lonaconing, Allegheny County, Maryland, U.S.A.**

Found 1888.

Synonym: Garrett County.

Iron. Coarse octahedrite.

A mass of 45 oz. ($1\frac{1}{2}$ kg.) was ploughed up in Garrett County, 12 miles south of the post-office of Lonaconing in Allegheny County (A. E. Foote, Amer. Journ. Sci., 1892, vol. 43, p. 64).

 $\frac{1}{2}$ kg. in Paris (École des Mines).

Specimen: [1913,102], a slice, 74 grams.

Long Island, Phillips County, Kansas, U.S.A.

Found 1891.

Synonym: Phillips County.

Stone. Veined intermediate hypersthene-chondrite.

About 3000 pieces, belonging to one stone and weighing together about 1244 lb., were found over a small area of about 15-20 ft. long by 6 ft. wide, in the N.W. corner of Phillips County, 3 miles west of the town of Long Island: described by E. Weinschenk (Tschermaks Min. Petr. Mitt., 1895, vol. 14, p. 471), and more fully by O. C. Farrington with analysis by H. W. Nichols (Publ. Field Columbian Mus., 1902, Geol. Ser., vol. 1, p. 283), $f = 3$, $n = 4$, $m = 3$.

Most of the material (over 543 kg.) in Chicago (Field Mus. Nat. Hist.).

Specimen: [81559], piece showing slickensided surface, 1285 grams.

*Lontolax, v. Luotolaks.**Los Angeles, v. Shingle Springs.****Los Reyes, Mexico State, Mexico.**

Found 1897.

Iron. Medium octahedrite.

A mass of 43 lb. was ploughed up about 40 miles east of Toluca: described by O. C. Farrington with analysis by H. W. Nichols (Publ. Field Columbian Mus. Chicago, 1902, Geol. Ser., vol. 1, p. 305), $Ni = 7.71\%$ ($n = 12$). Regarded by O. C. Farrington as distinct from Toluca, owing to distance and its high content of schreibersite.

Main mass in Chicago (Field Mus. Nat. Hist.).

Losttown, Cherokee County, Georgia, U.S.A.

Found 1868.

Synonym : Cherokee County.

Iron. Medium octahedrite.

A mass of about $6\frac{1}{2}$ lb. was ploughed up $2\frac{1}{2}$ miles S.W. of Losttown (C. U. Shepard, Amer. Journ. Sci., 1868, vol. 46, p. 257).

Main mass in Amherst College.

Specimen : [43684], $6\frac{1}{2}$ grams.*Louans*, v. Le Pressoir.*Louisa County*, v. Staunton.*Louisiana*, v. Red River.*Louvain*, v. Tourinnes-la-Grosse.*Löwenfluss* for Lion River, v. Bethany.*Lozère*, v. Aumieres.**Lucé**, Sarthe, France.

Fell 1768, Sept. 13, 4.30 p.m.

Synonym : Sarthe.

Stone. Veined white chondrite.

After detonations a stone of $3\frac{1}{2}$ kg. was seen to fall (— Fougereux, — Cadet, and A. L. Lavoisier, Introduction Observ. Phys., etc. (Journ. Physique), Paris, 1772 (1777 on title-page), vol. 2, p. 251).

Little preserved, 166 grams in Vienna (Naturhist. Mus.).

Specimens : [46009], 3 grams; [34590], 1 gram; [35159], 1 gram.

Lucky Hill, Bellevue, St. Elizabeth, Jamaica.

Found 1885.

Synonyms : Jamaica; St. Elizabeth.

Iron. Medium octahedrite.

An oxidized mass of over 45 lb. was dug up from 2 ft. below the surface (Jamaica Gazette (Supplement), Oct. 16, 1886, p. 740; and letter in Min. Dept., British Museum, of Sept. 15, 1885, from J. J. Bowrey, Curator of Institute of Jamaica, Kingston).

 $3\frac{1}{2}$ kg. in the Museum of Practical Geology, London.

Specimen : [56488], rusted fragments, 4640 grams.

Luis Lopez, Socorro County, New Mexico, U.S.A.

Found 1896.

Synonym : Magdalena.

Iron. Medium octahedrite.

A mass of about 7 kg. was picked up about 5 miles S.W. of Socorro : described by H. L. Preston and analysed by the firm of Mariner and Hoskins (Amer. Journ. Sci., 1900, vol. 9, p. 283), Ni = 8.17% ($n = 11$).

3 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [84548], a slice, 425 grams.

***Lujan**, Buenos Aires, Argentina.

Found before 1892.

Synonym : Villa Lujan

Stony-iron. Mesosiderite (?).

A piece was found 6 metres deep in Quaternary formation below remains

of a megatherium (M. Kantor, Cat. Col. Meteoritos, Rev. Mus. La Plata, 1920, vol. 25, p. 117; and H. A. Ward, Cat. Coll. Meteorites, Rochester, New York, 1892, p. 37, no. 147). Analysed by J. J. J. Kyle (M. Kantor, *l.c.*), mainly limonite but 3.45% NiO.

33 grams in La Plata Museum.

Lumpkin, Stewart County, Georgia, U.S.A.

Fell 1869, Oct. 6, 11.45 a.m.

Synonym : Stewart County.

Stone. Crystalline spherical hypersthene-chondrite.

After detonations, a stone of about $\frac{3}{4}$ lb. was seen to fall 12 miles S.W. of Lumpkin (J. W. Willet, Amer. Journ. Sci., 1870, vol. 50, p. 335). Analysed by J. L. Smith (*ibid.*, p. 339), $f = 7$, $n = 7$, $m = 3\frac{1}{2}$.

61 grams in Harvard University.

Specimen : [47239], $17\frac{1}{2}$ grams.

Lundsaar, v. Lundsgård.

Lundsgård, Ljungby, Gottland, Sweden.

Fell 1889, April 3, 8.30 p.m.

Synonyms : Ljungby; Lundsaar; Schonen.

Stone. White hypersthene-chondrite.

After the appearance of a luminous meteor and detonations, a stone of about 11 kg. was found (E. Svedmark, Geol. Fören. Förhandl. Stockholm, 1889, vol. 11, p. 245; Nature, London, 1889, vol. 40, p. 229). Analysed by O. Nordenskiöld (Geol. Fören. Förhandl. Stockholm, 1891, vol. 13, p. 470), m of olivine = 3, m of pyroxene = 4. Amount and composition of the nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 353), $f = 8\frac{1}{2}$, $n = 7$.

Main mass ($9\frac{1}{2}$ kg.) in Stockholm (Riksmus.).

Specimen : [69636], $195\frac{1}{2}$ grams.

Luotolax, Viborg, Finland.

Fell 1813, Dec. 13, day.

Synonym : Lontolax.

Stone. Howardite.

After detonations, a shower of stones fell on the surface of the ice of a lake near the village Luotolax, and few were recovered (Scherer's Allg. Nord. Ann. Chem., St. Petersburg, 1818, vol. 1, p. 474; Ann. Phys. (Gilbert), 1821, vol. 67, p. 370). Described and analysed by A. E. Arppe (Acta Soc. Sci. Fennica, Helsingfors, 1867, vol. 8, p. 37, pl.).

Over $\frac{1}{2}$ kg. in Helsingfors University.

Specimen : [41105*], $20\frac{1}{2}$ grams.

Luponnas, Ain, France.

Fell 1753, Sept. 7, 1 p.m.

Synonyms : Ain; Liponnas.

Stone. Brecciated intermediate chondrite.

After detonations, two stones were found, one of 9 kg. at Luponnas and the other of 5 kg. at Pont-de-Vesle (Jerome la Lande, Ann. Phys. (Gilbert), 1803, vol. 13, p. 343), but very little appears to have been preserved. Described and analysed by S. Meunier (Bull. Soc. Hist. Nat. Autun, 1892, vol. 5, p. 335).

84 grams in Vienna (Naturhist. Mus.), 66 grams in Paris (Mus. d'Hist. Nat.).

Specimens : [63923], $6\frac{1}{2}$ grams; [33727], 1 gram.

Lupton's Iron, v. Coahuila.

Lusignan d'Asso, v. Siena.

Lutschaunig's Stone, Desert of Atacama, Chile.

Found 1861.

Synonym : Atacama Desert.

Stone. Grey chondrite.

A mass of over 2 cwt. (100 kg.) was found in a "quebrada" in the Desert of Atacama about 1861, and fragments were brought as silver ore to Mr. A. Lutschaunig's mill at Copiapo to be crushed (letters from A. Lutschaunig of Oct. 21 and 25, 1889, in Min. Dept., British Museum).

Repository of the large mass unknown.

Specimens : [36107], 54½ grams; [44763], 31½ grams; [44764], 6 grams.

Lysá v. Lissa,

Macao, Rio Grande do Norte, Brazil.

Fell 1836, Nov. 11, 5 a.m.

Synonym : Macayo.

Stone. Veined intermediate chondrite.

After the appearance of a brilliant meteor, followed by detonations, a shower of stones, most of the size of doves' eggs, but some said to weigh from 1 lb. to 80 lb., fell near the mouth of the river Assu (F. Berthou, *Comptes Rendus Acad. Sci. Paris*, 1837, vol. 5, p. 211; P. Partsch, *Die Meteoriten*, Wien, 1843, p. 81; O. A. Derby, *Revista do Observatorio, Rio de Janeiro*, 1888, p. 7).

2 kg. in Rio de Janeiro (Mus. Nac.), ½ kg. in Vienna (Naturhist. Mus.).

Specimens : [35176], 3½ grams; [34742], 2½ grams.

Macayo, v. Macao.

Macedonia, v. Seres.

Macerata, v. Monte Milone.

Mackinney, v. McKinney.

Macon County, v. Auburn.

Maddur, v. Muddoor.

Madioen, v. Ngawi.

Madison County, v. Duel Hill.

Madoc, Hastings County, Ontario, Canada.

Found 1854.

Synonym : Hastings County.

Iron. Fine octahedrite.

A mass of 370 lb. was found (T. S. Hunt, *Amer. Journ. Sci.*, 1855, vol. 19, p. 417). Described by E. Cohen (*Meteoritenkunde*, 1905, Heft 3, p. 354).

Main mass in Ottawa (Mus. Geol. Surv. Canada).

Specimen : [26972], 205½ grams.

Madrid, Spain.

Fell 1896, Feb. 10, 9.30 a.m.

Stone. Veined white hypersthene-chondrite.

After appearance of a luminous meteor, followed by detonations, several small stones, one of which weighed 125 grams, fell near Madrid; the total weight collected was about 400 grams (S. Calderon, *Bull. Soc. Géol. France*, 1896, vol. 24, p. 117). Described by A. F. Gredilla and

partially analysed by S. Bonilla (Anal. Soc. Españ. Hist. Nat. Madrid, 1896, vol. 25, p. 223).

Specimen : [81851], a nearly complete stone, 18½ grams.

Mæl Pestivien, v. Kerilis.

Maêmê, v. Kyushu.

Magdalena, v. Luis Lopez.

Magdeburg, v. Erxleben.

Magetan, v. Ngawi.

Magura, Arva, Czechoslovakia.

Found 1840.

Synonyms : Arva; Orava; Szlanicza.

Iron. Coarse octahedrite.

A mass of about 1500 kg. was found, but the greater part was smelted and only about 150 kg. was saved (O. Buchner, *Die Meteoriten in Sammlungen*, Leipzig, 1863, p. 168; W. von Haidinger, *Ann. Phys.* (Poggendorff), 1844, vol. 61, p. 675, from the *Wien Zeitung*, April 17, 1844). Analysed by J. Fahrenhorst (E. Cohen, *Ann. Naturhist. Hofmus. Wien*, 1900, vol. 15, p. 377), Ni = 7.08% ($n = 13$), also by E. Cohen and E. Weinschenk (*ibid.*, 1891, vol. 6, p. 149) and by Manteuffel (*ibid.*, 1892, vol. 7, p. 155). Contains cliftonite (W. von Haidinger, *Ann. Phys.* (Poggendorff), 1846, vol. 67, p. 437; A. Brezina, *Ann. Naturhist. Hofmus. Wien*, 1889, vol. 4, p. 102). Occluded gases determined by A. W. Wright (*Amer. Journ. Sci.*, 1876, vol. 11, p. 257).

45 kg. in Tübingen University, 30 kg. in Vienna (Naturhist. Mus.), 19 kg. in Budapest (Hung. Nat. Mus.), 10 kg. in Berlin University.

Specimens : {33925}, 6477 grams; [19101c], 1416 grams; [19101b], 1217 grams.

Mahi Kantha, v. Myhee Caunta.

Mailsi, v. Khairpur.

Mainpuri, v. Chandpur.

Mainz, Hesse, Germany.

Found 1852.

Synonym : Mayence.

Stone. Veined intermediate hypersthene-chondrite.

A stone of about 1½ kg. was ploughed up : described and analysed by F. Seelheim (*Jahrb. Ver. Naturk. Nassau*, 1857, p. 405).

201 grams in Calcutta (Mus. Geol. Surv. India), 119 grams in Vienna (Naturhist. Mus.).

Specimens : [36134], 18 grams; [34674], 14½ grams; [35151], 1 gram.

Makariwa, Invercargill, County Southland, New Zealand.

Found 1879.

Synonym : Invercargill.

Stone. Brecciated grey hypersthene-chondrite.

A stone of about 5 lb. was found in clay about 2½ ft. from the surface : described by G. H. F. Ulrich (*Proc. Roy. Soc. London*, 1893, vol. 53, p. 54), and by L. Fletcher, by whom it was also analysed (*Mineral. Mag.*, 1894, vol. 10, p. 287), $f = 5$, $n = 4$, $m = 3$.

Small pieces in the Dunedin and Wellington Museums.

Specimens : [76068], two pieces, $35\frac{1}{2}$ and $15\frac{1}{2}$ grams; [76069], $11\frac{1}{2}$ grams.

Maksimovka, v. Vavilovka.

Mânabazar pargana, v. Manbhoom.

Manbhoom, Bengal, India.

Fell 1863, Dec. 22, 9 a.m.

Synonyms : Cossipore; Mânabazar pargana.

Stone. Amphoterite.

After detonations, several stones, of which the largest weighed about $1\frac{1}{2}$ kg., were found near the villages of Govindpur, Pandra, and Cossipore (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1864-5, vol. 50, Abt. 2, p. 241). Described and analysed by H. B. von Foullon (Ann. Naturhist. Hofmus. Wien, 1888, vol. 3, p. 202), $f = 2$, $n = 1\frac{1}{2}$, $m = 2\frac{1}{2}$.

700 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [36284], 123 grams.

Manegaon, Bhusawal, East Khandesh district, Bombay, India.

Fell 1843, June 29, 3.30 p.m.

Synonyms : Khandesh district; Manegaum.

Stone. Diogenite (hypersthene-achondrite).

After detonations, an oblong stone, about 15 in. long and 5 in. in diameter, was seen to fall; it was broken to pieces and only a few ounces were preserved (J. Abbott, Journ. Asiatic Soc. Bengal, 1844, vol. 13, p. 880). Described by N. S. Maskelyne and analysed by him and W. Flight (Phil. Trans. Roy. Soc. London, 1870, vol. 160, p. 211), $m = 2$.

32 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [33759], two pieces, $11\frac{1}{2}$ grams.

Manegaum, v. Manegaon.

Mañi, v. Toluca.

Mantos Blancos, Atacama, Chile.

Found 1876.

Synonyms : Antofagasta; Mount Hicks.

Iron. Fine octahedrite.

A mass of 10.3 kg. was found on the S.E. side of Mount Hicks, about 40 miles from Antofagasta: described and analysed by L. Fletcher (Mineral. Mag., 1889, vol. 8, p. 257), Ni = 8.83% ($n = 10$).

399 grams in Vienna (Naturhist. Mus.).

Specimen : [53323], the main mass, 9015 grams, and pieces, 375 grams.

Marengo, v. Homestead.

***Mariaville, Rock County, Nebraska, U.S.A.**

Fell 1898, Oct. 16, midnight.

Synonym : Rock County.

Iron.

A mass of 340 grams is said to have fallen after appearance of light and detonations (E. H. Barbour, Rep. Nebraska Geol. Surv., Lincoln, 1903, vol. 1, p. 184, fig.).

Repository unknown

*Marimba district, v. Kota-Kota.***Marion**, Linn County, Iowa, U.S.A.

Fell 1847, Feb. 25, 2.45 p.m.

Synonyms: Hartford; Iowa; Linn County.

Stone. Veined white hypersthene-chondrite.

After detonations, a stone of about 2½ lb. was seen to fall 9 miles due south of Marion, and two other stones were found later, one of about 40 lb. and the other 20 lb. (C. U. Shepard, Amer. Journ. Sci., 1847, vol. 4, pp. 288, 429; 1848, vol. 6, p. 403; and 1851, vol. 11, p. 38). Analysed by C. Rammelsberg (Monatsber. Akad. Wiss. Berlin, 1870, p. 457), $f = 10\frac{1}{2}$, $n = 9$, $m = 3\frac{1}{2}$.

The 20 lb. stone is in Amherst College, 1 kg. in Yale University.

Specimens: [23384], 805½ grams, and fragments, 8 grams; [25464], 137 grams.

Marjalahti, Viborg, Finland.

Fell 1902, June 1, 10 p.m.

Stony-iron. Pallasite.

After appearance of a luminous meteor followed by detonations, a stone of about 45 kg. was seen to fall and was broken in pieces: described and analysed by L. H. Borgström (Bull. Comm. Géol. Finlande, 1903, no. 14, p. 45), $f = 80$, $n = 12$, m of olivine = 7.

Main mass in Helsingfors (Geol. Kom.).

Specimens: [86584], 2990 grams; [1920,318], a slice, 103 grams.

Marmande, Lot-et-Garonne, France.

Fell 1848, July 4.

Synonym: Montignac.

Stone. Spherical chondrite.

A fragment, labelled as from a stone of 3 kg. which fell on the above date, was found amongst the effects of Col. Gabalda (label with specimen in British Museum Collection; and R. P. Greg, Phil. Mag., 1862, vol. 24, p. 540).

Only a few grams known in collections; 25 grams in Vienna (Naturhist. Mus.).

Specimen: [35158], 4¾ grams.

*Marmoros, v. Borkut.**Maros, v. Mezö-Madaras.***Marshall County**, Kentucky, U.S.A.

Described 1860.

Iron. Medium octahedrite.

A piece from a mass said to weigh 15 lb. was analysed by J. L. Smith (Amer. Journ. Sci., 1860, vol. 30, p. 240), Ni = 8.72% ($n = 10\frac{1}{2}$).

6 lb. in Amherst College.

Specimen: [34581], 80 grams.

*Marshall County, v. Plymouth.***Mart**, McLennan County, Texas, U.S.A.

Found 1898.

Iron. Finest octahedrite.

An oval mass of 15½ lb. was found on a farm: described by G. P. Merrill

and analysed by H. N. Stokes (Proc. Washington Acad. Sci., 1900, vol. 2, p. 51), Ni = 9.20% ($n = 10$).

Main mass in Baylor University, Waco, Texas.

Specimen : [84881], a slice, 430 grams.

Maryland, v. Emmitsburg; Lonaconing; Nanjemoy.

Mascombes, Corrèze, France.

Fell 1835, Jan. 31, midnight.

Stone. White chondrite.

A stone of about 1 kg. fell, after detonations (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1864, vol. 58, p. 229; O. Buchner, Ann. Phys. (Poggendorff), 1865, vol. 124, p. 579).

$\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat.).

Specimens : [56463], $4\frac{1}{4}$ grams; [41112], $\frac{3}{4}$ gram.

Mässing, Eggenfelden, Lower Bavaria, Germany.

Fell 1803, Dec. 13, 10.30 a.m.

Synonyms : Eggenfelden; St. Nicholas.

Stone. Howardite.

After detonations, a stone of 1.6 kg. was seen to fall (M. Imhof, Ann. Phys. (Poggendorff), 1804, vol. 18, p. 330). Described by C. W. Gumbel and analysed by A. Schwager (Sitzungsber. Akad. Wiss. München, Math.-phys. Kl., 1878, vol. 8, p. 32), m of olivine = 2, m of pyroxene = $\frac{1}{2}$.

Very little preserved; 22 grams in Berlin University, 22 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [35161a], less than 1 gram.

Matatiela, Drakensberg, Cape Province, South Africa.

Known in 1878.

Iron. Medium octahedrite.

A mass of 675 lb. was brought to Kokstad about 1884 from a hill a mile from Matatiela, towards Ongeluk's Nek, in the Drakensberg (E. Cohen, Ann. South African Mus. Cape Town, 1900, vol. 2, p. 9). Described by E. Cohen and analysed by J. Fahrenhorst (*l.c.*, p. 15), Ni = 7.30% ($n = 13$). Possibly identical with Kokstad, though the etched characters of the two irons differ somewhat.

Main mass in Cape Town (South African Mus.).

Specimen : [84470], a slice, 40 grams.

Mau, v. Mhow.

Mauerkirchen, Upper Austria.

Fell 1768, Nov. 20, 4 p.m.

Stone. White hypersthene-chondrite.

After detonations, a stone of about 19 kg. fell (E. F. F. Chladni, Ann. Phys. (Poggendorff), 1803, vol. 15, p. 316). Described by C. W. Gumbel and analysed by A. Schwager (Sitzungsber. Akad. Wiss. München, Math.-phys. Kl., 1878, vol. 8, p. 16); also analysed by F. Crook (Inaug.-Diss., Göttingen, 1868, p. 26), $f = 4$, $n = 4$, $m = 2$.

$7\frac{1}{2}$ kg. in Munich, 2 kg. in Göttingen University, $\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.).

Specimens : [1996], 302 grams; [1920,319], 3 grams.

Mauléon, v. Sauguis. $\mathbf{\nabla}$

***Mauritius, Indian Ocean.**

Fell 1801, Dec. 22.

Synonyms: Böttcher Island; Isle de France; Tonnelier.

Stone. "Howarditic" chondrite.

After detonations and appearance of light, three stones, one as large as a melon and two as an orange, fell on the Isle aux Tonneliers (E. F. F. Chladni, *Feuer-Meteore*, Wien, 1819, p. 268).

204 grams in the Royal Scottish Museum, Edinburgh.

*Maverick County, v. Fort Duncan (under Coahuila).**Mayence, v. Mainz.***Mazapil, Zacatecas, Mexico.**

Fell 1885, Nov. 27, 9 p.m.

Iron. Medium octahedrite.

A mass of about 4 kg. fell during a star-shower: described by W. E. Hidden and analysed by J. B. Mackintosh (*Amer. Journ. Sci.*, 1887, vol. 33, p. 223), Ni = 7.84% ($n = 12$).

3½ kg. in Vienna (Naturhist. Mus.).

Specimen: [67451], 14 grams.

McKinney, Collin County, Texas, U.S.A.

Found 1870.

Synonyms: Collin County; Mackinney; Rockport.

Stone. Black hypersthene-chondrite.

Two stones, of which the larger weighed 100 kg., were found (or were seen to fall ?) 8 miles west of McKinney (A. Brezina, *Ann. Naturhist. Hofmus. Wien*, 1895, vol. 10, p. 252). Analysed by J. E. Whitfield (G. P. Merrill, *Amer. Journ. Sci.*, 1913, vol. 35, p. 520; and *Mem. Nat. Acad. Sci. Washington*, 1916, vol. 14, mem. 1, p. 19), $f = 6$, $n = 6\frac{1}{2}$.

Over 57 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [1921,439], an end slice, 999 grams; [76265], 290 grams.

*Mecca, v. Kaaba.**Mecherburg, v. Mühlau.**Mecklenburg County, v. Monroe.**Medwedewa, v. Krasnojarsk.****Meerut, Meerut district, United Provinces, India.**

Fell about 1860-62.

Stone. Intermediate chondrite.

22 grams in Calcutta (*Mus. Geol. Surv. India*) (J. Coggin Brown, *Cat. Meteorites Coll. Geol. Surv. India, Calcutta*, 1916, p. 235).

***Mejillones, Atacama, Chile.**

Found before 1875.

Synonym: Polanko.

Iron. Brecciated hexahedrite.

A mass so big that "a cart would be required for its carriage" was found 3 or 4 leagues from the Bay of Mejillones (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1875, vol. 81, p. 597).

703 grams in Harvard University, 164 gram in Paris (*Mus. d'Hist. Nat.*).

Mejillones, v. Vaca Muerta.

Melbourne, v. Cranbourne.

Melville Bay, v. Cape York.

Menow, Alt-Strelitz, Mecklenburg, Germany.

Fell 1862, Oct. 7, 12.30 p.m.

Synonyms : Fürstenberg ; Klein-Menow.

Stone. Crystalline spherical chondrite.

A stone of about 10½ kg. fell, after detonations, near Fürstenberg (Ann. Phys. (Poggendorff), 1862, vol. 117, p. 637).

2.7 kg. in Calcutta (Mus. Geol. Surv. India).

Specimens : [50928], 1132 grams ; [35181], ½ gram.

Merceditas, Chañaral, Atacama, Chile.

Found 1884.

Synonyms : Chañaral ; Chañarlino ; El Chañaralino.

Iron. Medium octahedrite.

A mass of about 94½ lb. was found near a mining camp, 10 or 12 leagues east of Chañaral (E. E. Howell, Proc. Rochester Acad. Sci., 1890, vol. 1, p. 99). Described by E. Cohen and analysed by J. Fahrenhorst (Ann. Naturhist. Hofmus. Wien, 1900, vol. 15, p. 379), Ni = 7.33% ($n = 13$).

A mass of 11.2 kg. also found in 1884 in the interior from Chañaral (H. A. Ward, Proc. Rochester Acad. Sci., 1906, vol. 4, p. 230) is possibly identical with Merceditas, so also is Ilimaes (G. T. Prior).

7½ kg. in Vienna (Naturhist. Mus.), 2 kg. in Budapest (Hung. Nat. Mus.), 1½ kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [66742], 1917 grams.

Mern, Præsto, Denmark.

Fell 1878, Aug. 29, 2.30 p.m.

Stone. Veined crystalline spherical chondrite.

A stone of about 4 kg. fell, after detonations (S. Tromholt, Wochenschr. Astron. Meteor. Geogr. Halle, 1878 (1879), Jahrg. 21, p. 391). Described by A. Brezina and W. Wahl (Mem. Acad. Sci. Denmark, Copenhagen, 1909, vol. 6, no. 3, p. 113, 3 pls.).

Main mass (3½ kg.) in Copenhagen University.

Specimens : [1920,321], 75 grams ; [1906,28], 39 grams ; [1920,320], two fragments, 5 grams.

Mesquital for Mezquital, v. San Francisco del Mezquital.

Meung sur Loire, v. Charsonville.

Meuselbach, Thuringia, Germany.

Fell 1897, May 19, 7.45 p.m.

Stone. Veined crystalline spherical hypersthene-chondrite.

A stone of about 870 grams was seen to fall after detonations : described and analysed by G. Linck (Ann. Naturhist. Hofmus. Wien, 1898, vol. 13, p. 103), $f = 8$, $n = 6$, $m = 3$.

58 grams in Vienna (Naturhist. Mus.).

Specimen : [84245], 19½ grams.

Mexico, v. Pampanga.

ö-Madaras, Transylvania.

Fell 1852, Sept. 4, 4.30 p.m.

Synonyms : Fekete; Maros.

Stone. Brecciated grey hypersthene-chondrite.

After the appearance of a luminous meteor and detonations, a shower of many stones fell, of which the largest weighed about 10 kg. and the total weight was about 22.7 kg. (W. Knöpfler, Verh. Siebenbürg. Ver. Naturwiss., Hermannstadt, 1853, vol. 4, p. 19). Analysed by C. Rammelsberg (Ber. Deutsch. Geol. Gesell. Berlin, 1871, vol. 23, p. 734), $f = 9$, $n = 5$, $m = 3$.

Specimens : [33909], a nearly complete stone, 668 grams; [33188], most of a stone, 65½ grams; [90270], 33 grams.

Mezquital, v. San Francisco del Mezquital.

Mhow, Azamgarh district, United Provinces, India.

Fell 1827, Feb. 16, 3 p.m.

Synonyms : Ghazeepore; Mau; Mow.

Stone. Intermediate chondrite.

After detonations, four or five stones fell, one of which broke a tree and another wounded a man; the largest stone weighed 3 lb. (Edinburgh Journ. Sci., 1828, vol. 9, p. 172; N. S. Maskeleyne, Phil. Mag., 1863, vol. 25, p. 447).

Very little preserved in collections; 128 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [34806], 163 grams.

Middlesbrough, Yorkshire, England.

Fell 1881, March 14, 3.35 p.m.

Synonyms : Pennymans Siding; Yorkshire.

Stone. White hypersthene-chondrite.

After detonations (not heard actually at the place of fall), a stone of 3½ lb. was seen to fall at Pennymans Siding on the railway from Middlesbrough to Guisbrough, about 1½ miles from Middlesbrough (A. S. Herschel, Rep. British Assoc. for 1881, p. 296). Described and analysed by W. Flight (Phil. Trans. Roy. Soc. London, 1882, vol. 173, p. 896).

Main mass in York Museum.

Specimen : [54267], 22 grams.

Midt-Vaage, v. Tysnes.

Mighei, Olviopol, Kherson, Ukraine.

Fell 1889, June 18, 8.30 a.m.

Synonyms : Elisabethpol; Migheja.

Stone. Carbonaceous chondrite.

After the "usual light and sound phenomena," a stone, of over 8 kg. according to the total weight in collections, was seen to fall (Nature, London, 1890, vol. 41, p. 472). Described and partially analysed by S. Meunier (Comptes Rendus Acad. Sci. Paris, 1889, vol. 109, p. 976).

2½ kg. in Odessa University.

Specimens : [86947], 147 grams; [65604], 87 grams; [1920,322], 12 grams.

Migheja, v. Mighei.

Mikenskoi, v. Grosnaja.

Mikkeli, v. St. Michel.

Milena, Varazdin, Croatia, Yugoslavia.

Fell 1842, April 26, 3 p.m.

Synonyms: Miljana; Pusinsko Selo.

Stone. White chondrite.

After appearance of a luminous meteor, followed by detonations, two (or three) stones, each of 5 to 6 kg., fell at Pusinsko Selo, 4 miles south of Milena, but were mostly broken up (— Koccevar, Ann. Phys. (Poggen-dorff), 1842, vol. 56, p. 349; F. E. von Rosthorn, Neues Jahrb. Min., 1843, p. 79).

260 grams in Budapest (Hung. Nat. Mus.); main mass perhaps in Zagreb (Agram) Museum.

Specimens: [54815], 127 grams; [35403], 22 grams; [34594], $\frac{1}{2}$ gram; [1920,323], fragments, $\frac{1}{2}$ gram.

Miljana, v. Milena.*Miller's Run*, v. Pittsburg.***Milly Milly**, Western Australia.

Known 1921.

Iron. Octahedrite.

A mass of 58 lb. was found by a native (Ann. Rep. Geol. Surv. Western Australia for 1921, 1922, p. 53).

Main mass in Perth, Western Australia (Geol. Surv. Mus.).

Milwaukee, v. Trenton.**Minas Geraes** (?), Brazil.

Known in 1888.

Stone. Veined white chondrite.

A piece of 1.2 kg. was found without label among specimens which may have been brought from Minas Geraes (O. A. Derby, Revista do Observatorio, Rio de Janeiro, 1888, p. 12; Amer. Journ. Sci., 1888, vol. 36, p. 157).

Main mass in Rio de Janeiro (Mus. Nac.), 422 grams in Chicago (Field Mus. Nat. Hist.).

Specimens: [1905,434], 62 grams; [63235], $3\frac{1}{2}$ grams.

Mincy, Taney County, Arkansas, U.S.A.

Found 1857.

Synonyms: Crawford County; Forsyth; Miney; Newton County; Taney County.

Stony-iron. Mesosiderite.

A mass of about 197 lb. is stated to have fallen in 1857, 11 miles S.E. of Forsyth, whence it was taken to a farm in Newton County (G. F. Kunz, Amer. Journ. Sci., 1887, vol. 34, p. 467). Described and analysed by J. L. Smith under the name of Newton County (*ibid.*, 1865, vol. 40, p. 213), $n = 12\frac{1}{2}$, m of olivine = 7, m of pyroxene = 3. Also analysed by J. E. Whitfield (G. F. Kunz, *l.c.*, p. 468), $n = 9$, m of pyroxene = $2\frac{1}{2}$; and described by G. T. Prior (Mineral. Mag., 1918, vol. 18, p. 164).

39 kg. in Vienna (Naturhist. Mus.).

Specimens: [68579], 2375 grams; [40885], 60 grams; [40886], 16 grams.

Miney, v. Mincy.*Minsk*, v. Brahın; Zhenj.

Mirzapur, Ghazipur district, United Provinces, India.

Fell 1910, Jan. 7, 11.30 a.m.

Stone. Veined and brecciated intermediate chondrite.

After detonations, a stone fell, of which two pieces, weighing respectively 8.3 kg. and 208½ grams, were recovered (G. de P. Cotter, *Rec. Geol. Surv. India*, 1912, vol. 42, p. 272).

The larger piece in Calcutta (*Mus. Geol. Surv. India*).

Specimen: [1915,141], the smaller piece found, 208½ grams.

Misshof, Courland, Latvia.

Fell 1890, April 10, 3.30 p.m.

Synonyms: Baldohn; Mittel-Stuhre.

Stone. Spherical bronzite-chondrite.

After detonations, a stone of about 5.8 kg. fell: described by B. Doss (*Arbeiten Naturf. Ver. Riga*, 1891, Heft 7, p. 1, map and figs.; and *Neues Jahrb. Min.*, 1892, Bd. 1, p. 71): analysed by E. Johanson (B. Doss, *l.c.* (*Arbeiten*, etc.), p. 69), $f = 18$, $n = 12$, $m = 3\frac{1}{2}$. Contains no tin (J. E. Whitfield, *Mem. Nat. Acad. Sci. Washington*, 1919, vol. 14, mem. 1, p. 23). 2½ kg. in Riga (Polytech.).

Specimens: [67591], two pieces, 134 grams; [1920,284], 68 grams.

Missouri, v. Little Piney; St. Francois County.**Misteca**, Oaxaca, Mexico.

Known 1804.

Synonym: Oaxaca.

Iron. Medium octahedrite.

Del Rio mentions La Misteca as a locality for metallic iron (*Tablas Mineralogicas*, 1804, p. 57; L. Fletcher, *Mineral. Mag.*, 1890, vol. 9, p. 172). A specimen brought away by Karavinsky was presented to the Vienna Collection (P. Partsch, *Die Meteoriten*, Wien, 1843, p. 134). A specimen obtained by H. J. Burkart (*Neues Jahrb. Min.*, 1856, p. 305) was analysed by C. Bergemann (*Ann. Phys. (Poggendorff)*, 1857, vol. 100, p. 246). Also analysed by — Manteuffel (E. Cohen, *Ann. Naturhist. Hofmus. Wien*, 1892, vol. 7, p. 152), $Ni = 8.21\%$ ($n = 11$).

Has been confused with Yanhuítlan, hence repository of main masses uncertain.

Specimens: [35187], 164½ grams; [35173], 152 grams.

Misteca (in part), v. Yanhuítlan.**Mitchell County**, v. Waconda.**Mittel-Stuhre**, v. Misshof.**Mocs**, Cluj (= Klausenburg, Kolozsvár), Transylvania.

Fell 1882, Feb. 3, 4 p.m.

Synonyms: Báré; Gyulatelke; Klausenburg; Visa.

Stone. Veined white hypersthene-chondrite.

After appearance of luminous meteor and detonations, a shower of stones fell; the number has been estimated at 3000 and the total weight at about 300 kg., the largest stone weighing about 56 kg. (A. Koch, *Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1882, vol. 85, Abt. 1, p. 116; and Tschermaks *Min. Petr. Mitt.*, 1883, vol. 5, p. 234; G. von Niessl, *Sitzungsber. Akad. Wiss. Wien, Math. naturwiss. Kl.*, 1884, vol. 89, Abt. 2, p. 283). Described by G. Tschermak (*ibid.*, 1882, vol. 85, Abt. I, p. 195), and analysed by F. Koch (A. Koch, *Tschermaks Min. Petr. Mitt.*, 1883, vol. 5, p. 242), $f = 5$, $n = 3$, $m = 2$.

• 42.8 kg., including a stone of 35.7 kg., in Cluj Museum; 21 kg. in Budapest (Hung. Nat. Mus.).

Specimens: [54772], a complete stone from Olah Gyéres, 8635 grams; [54773], a complete stone from Keszú, 4630 grams; [54647], a nearly complete stone from Béré, 826 grams; [54648], a complete stone from Béré, 276 grams; [54651], from Béré, 132½ grams; [54649], a complete stone from Gyulatelke, 81½ grams; [54775], from Vajda-Kamaras, 27½ grams; [54774], from Palatka, 25 grams; [54776], from Marokháza, 20½ grams; [54650], a complete stone from Visa, 17½ grams; [54777], from Visa, 5½ grams.

Moctezuma, Sonora, Mexico.

Found 1899.

Iron. Medium octahedrite.

The main mass, of which the weight has not been published, is in the School of Mines, City of Mexico (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 17).

Specimen: [84882], a slice, 170 grams.

Moctezuma (of F. Berwerth), v. Arispe.

Modena, v. Albareto.

Modoc, Scott County, Kansas, U.S.A.

Fell 1905, Sept. 2, 9.30 p.m.

Stone. Veined white hypersthene-chondrite.

After appearance of luminous meteor, followed by detonations, fifteen to twenty stones were found scattered over an area of about 2 miles by 7 miles; the largest stone weighed about 10½ lb. and the total weight was about 35 lb.: described by O. C. Farrington (Publ. Field Columbian Mus. Chicago, 1907, Geol. Ser., vol. 3, p. 120), and by G. P. Merrill with analysis by W. Tassin (Amer. Journ. Sci., 1906, vol. 21, p. 356), $f = 7$, $n = 9½$, $m = 3½$.

Over 4 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [1908,260], a complete stone, 2045 grams.

Mokoia, Taranaki, North Island, New Zealand.

Fell 1908, Nov. 26, 12.30 p.m.

Stone. Carbonaceous chondrite.

After appearance of moving cloud and detonations, several stones were seen to fall, and two of about 5 lb. each were recovered: described by G. R. Marriner and partially analysed by B. C. Aston (Trans. New Zealand Institute, 1909, vol. 42, p. 176).

Main masses in Wanganui Museum.

Specimen: [1910,729], 175 grams.

Molina, Murcia, Spain.

Fell 1858, Dec. 24.

Synonym: Murcia.

Stone. Brecciated grey bronzite-chondrite.

A stone of 114 kg. fell: described by G. A. Daubrée and analysed by S. Meunier (Comptes Rendus Acad. Sci. Paris, 1868, vol. 66, p. 639).

Main mass in Madrid (Mus. Cienc. Nat.).

Specimens: [1923,143], 395 grams; [411,1], 6 grams.

Molong, County Ashburnham, New South Wales.

Found 1912.

Stony-iron. Pallasite.

A mass of about 230 lb. was found on Ti-Tree Creek, 12 miles N.W. of Canoblas: described and analysed by J. C. H. Mingaye (Rec. Geol. Surv. New South Wales, 1916, vol. 9, p. 161, 3 pls.), $f = 48\frac{1}{2}$, $n = 10$, m of olivine = 9.

Main mass in Sydney (Mining and Geol. Mus.).

Specimen: [1915,144], 2022 grams.

Monmouth County, v. Deal.**Monroe, Cabarrus County, North Carolina, U.S.A.**

Fell 1849, Oct. 31, 3 p.m.

Synonyms: Cabarras County; Cabarrus County; Charlotte;

Flows; Mecklenburg County.

Stone. Veined grey bronzite-chondrite.

After detonations, a stone of about 19 lb. was found near the post-office Flows, 22 miles east of Charlotte and 18 miles from Monroe (J. H. Gibbon, Amer. Journ. Sci., 1850, vol. 9, p. 143; C. U. Shepard, *ibid.*, vol. 10, p. 127). Described by G. P. Merrill and analysed by J. E. Whitfield (Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 20), $f = 13\frac{1}{2}$, $n = 14$, $m = 5$.

Over 14 lb. in Amherst College.

Specimens: [25462], 385 grams; [33737], $\frac{1}{2}$ gram.**Monroe County, v. Forsyth.****Montauban, v. Orgueil.*****Monte Alto, Bahia, Brazil.**

Known 1888.

Iron.

Mentioned by O. A. Derby (Revista do Observatorio, Rio de Janeiro, 1888, p. 20).

Monte Milone, Macerata, Italy.

Fell 1846, May 8, 9.15 a.m.

Synonym: Macerata.

Stone. Brecciated white chondrite.

After detonations, many stones fell (some in the river Potenza) 8 miles from Macerata: of five stones recovered, the largest weighed about 3 kg. (L'Institut, Paris, 1846, vol. 14, p. 340).

2 kg. in Rome University.

Specimen: [33962], 8 grams.

Montignac, v. Marmande.**Montlivault, Loir-et-Cher, France.**

Fell 1838, July 22, day.

Stone. White chondrite.

A stone of about $\frac{1}{2}$ kg. was seen to fall, after detonations, in the valley Cul-de-Four on the left bank of the Loire (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1873, vol. 76, p. 314).

5 $\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat.).

Specimen: [71571], a slice, 11 grams.

Montpelegry, v. Graçaç.

Montréjeau, v. Ausson.

Mooltan for Multan, v. Khairpur; Lodran.

***Moonbi**, Moonbi Range, County Inglis, New South Wales.

Found 1892.

Iron. Fine octahedrite.

A mass of 29 lb. was found about 18 miles from Moonbi (G. W. Card, Rec. Geol. Surv. New South Wales, 1897, vol. 5, p. 49). Described and analysed by J. C. H. Mingaye (Journ. and Proc. Roy. Soc. New South Wales, 1893, vol. 27, p. 82, figs.), Ni = 7.87% ($n = 12$).

Main mass in Sydney (Tech. Mus.).

Mooradabad, v. Moradabad.

Mooranoppin, County Lansdowne, Western Australia.

Found about 1893.

Iron. Coarsest octahedrite.

A mass of 2½ lb. was found "in or before 1893" 160 miles east of York (T. Cooksey, Rec. Australian Mus. 1897, vol. 3, p. 58; H. A. Ward, Amer. Journ. Sci., 1898, vol. 5, p. 140). Analysed by H. Bowley (Bull. Soc. Geol. Surv. Western Australia, 1916, no. 67, p. 136), Ni = 7.21% ($n = 12½$).

173 grams in Chicago (Field Mus. Nat. Hist.).

Specimen: [82748], a slice, 261 grams.

Moorestfort, County Tipperary, Ireland.

Fell 1810, August, noon.

Synonym: Tipperary.

Stone. Veined grey chondrite.

After appearance of moving cloud and sounds like thunder, a stone of 7½ lb. was seen to fall (W. Higgins and M. C. Moore, A. Tillock's Phil. Mag., 1811, vol. 38, p. 262).

1½ kg. in Dublin (Mus. Sci. and Art).

Specimens: [19968], 174 grams; [61309], 49½ grams; [90256], 19½ grams; [1920,324], 14 grams.

Moradabad, Moradabad district, United Provinces, India.

Fell 1808.

Synonyms: Mooradabad; Panganur.

Stone. White chondrite.

The original weight and details of fall are unknown: only 2½ oz. (70 grams) of fragments were preserved in the Collection of the Asiatic Society at Calcutta (Journ. Asiatic Soc. Bengal, 1859, vol. 28, p. 259; N. S. Maskelyne, Phil. Mag., 1828, vol. 25, p. 449).

27 grams in Calcutta (Mus. Geol. Surv. India).

Specimen: [33758], 17 grams.

Morbihan, v. Kérnouvé.

Mordvinovka, v. Pavlograd.

Morelos, v. Amates; Cuernavaca.

Morgan County, v. Walker County.

***Morito**, Chihuahua, Mexico.

Known 1600.

Synonyms: El Morito; Humboldt Iron (?); San Gregorio; Valle de Allend.

Iron. Medium octahedrite.

An enormous mass of about 11,000 kg. (11 tons) was known to the Indians before 1600: its history is given by L. Fletcher (*Mineral. Mag.*, 1890, vol. 9, pp. 124-40), and by O. C. Farrington (*Cat. Meteorites North America*, *Mem. Nat. Acad. Sci. Washington*, 1915, vol. 13, p. 312).

Main mass in Mexico City (School of Mines).

Mornans, Bourdeaux, Drôme, France.

Fell 1875, September.

Synonym: Bourdeaux.

Stone. Veined grey chondrite.

A stone of about 1.3 kg. fell, after detonations (J. R. Gregory, *Geol. Mag.*, 1887, p. 553).

Specimen: [63551], the main mass of the stone, 973 grams, and pieces, 46 grams.

***Morradal, Grjotli, between Skiaker and Stryn, Norway.**

Found 1892.

Iron. Nickel-rich ataxite.

A mass of 2½ kg. was found: described by E. Cohen with analysis by O. Sjöström (*Meteoritenkunde*, 1905, Heft 3, p. 122), Ni = 18.77% ($n = 4$).

Main mass in Christiania University.

Morristown, Hamblen County, Tennessee, U.S.A.

Found 1887.

Synonyms: East Tennessee; Hamblen County; Safford Meteorite.

Stony-iron. Mesosiderite.

Several masses weighing together about 36 lb. were found about 6 miles W.S.W. of Morristown: described and analysed by L. G. Eakins (*Amer. Journ. Sci.*, 1893, vol. 46, pp. 283, 482), f = about 50, $n = 12$, m of pyroxene = 2. Also described by G. P. Merrill (*ibid.*, 1896, vol. 5, p. 149), and by G. T. Prior (*Mineral. Mag.*, 1918, vol. 18, p. 169).

4½ kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [81008], 415½ grams; [77095], 142 grams.

Morro do Rocio, v. Santa Catharina.

Motecka-Nugla } v. Moti-ka-nagla.
Motecka-Nugla }

Moti-ka-nagla, Goordha, Biana district, Bharatpur, Rajputana, India.

Fell 1868, Dec. 22, 5 p.m.

Synonyms: Bhurtpur; Ghoordha; Motecka-Nugla; Motecka-Nugla.

Stone. Crystalline chondrite.

After appearance of a luminous meteor (passing from N.E. to S.W.), and detonations, a shower of stones fell, but only three were found; the largest fragment weighing about 3½ lb. was preserved in the Indian Museum, Calcutta (F. Fedden, *Cat. Meteorites, Indian Museum, Calcutta*, 1880, p. 26; and extracts from letters of the Political Agent, Bharatpur, of Jan. 6, 1869, and of A. C. L. Carlyle of Nov. 23, 1869, in *Min. Dept., British Museum*).

1.1 kg. in Calcutta (*Mus. Geol. Surv. India*).¹

Specimen: [43332], 417 grams.

***Motta di Conti, Casale, Piedmont, Italy.**

Fell 1868, Feb. 29, 11 a.m.

Synonyms: Casale; Piedmont; Villanova.

Stone. Spherical chondrite.

After appearance of a luminous meteor (moving from N.W. to S.E.), and detonations, several stones fell between Villanova and Motta di Conti: one of 1.9 kg. was seen to fall about $\frac{1}{4}$ mile S.E. of Villanova, another of $6\frac{1}{2}$ kg. $\frac{3}{4}$ mile distant, and a third of about $\frac{1}{2}$ kg., which broke into fragments, at Motta di Conti: described by P. F. Denza with analysis by — Bertolio (Comptes Rendus Acad. Sci. Paris, 1868, vol. 67, p. 322).

The largest stone (6 kg.) in Turin University.

Mount Ayliff, Griqualand East, Cape Province, South Africa.

Known 1907.

Iron. Coarse octahedrite.

A mass of about 30 lb. was found about 1907: described and analysed by G. T. Prior (Mineral. Mag., 1921, vol. 19, p. 163), Ni = 6.59% ($n = 14$).

Main mass in King William's Town Museum, South Africa.

Specimens: [1920,140], a polished and etched piece, 189 grams; [1920,214], a polished and etched slice, 95 grams; [1920,141], fragments, $6\frac{1}{2}$ grams.

Mount Browne, County Evelyn, New South Wales.

Fell 1902, July 17, 9.30 a.m.

Stone. Spherical bronzite-chondrite.

After detonations, a stone of about 25 lb. was seen to fall (G. W. Card, Rec. Geol. Surv. New South Wales, 1903, vol. 7, p. 218). Analysed by H. P. White (*ibid.*, p. 312), $f = 18$, $n = 9$, $m = 5$.

Main mass in Sydney (Mining and Geol. Mus.).

Specimens: [86644], 148 grams; [1920,325], 53 grams.

***Mount Dooling, North Yilgarn, Western Australia.**

Found 1909.

Synonym: Lake Giles.

Iron. Medium octahedrite.

A mass of 69 lb. was found (E. S. Simpson, Bull. Geol. Surv. Western Australia, 1912, no. 48, p. 83).

Main mass in Perth, Western Australia (Geol. Surv. Mus.).

Mount Dyrning, Singleton district, County Durham, New South Wales.

Found 1903.

Stony-iron. Pallasite.

Fragments weighing together about 25 lb. were found 8 miles north of Bridgman (G. W. Card, Rec. Geol. Surv. New South Wales, 1903, vol. 7, p. 218). Analysed by J. C. H. Mingaye (*ibid.*, p. 305), $f = 25$, $n = 19$, m of olivine = 7.

Main mass in Sydney (Mining and Geol. Mus.).

Specimen: [86643], 235 grams.

Mount Edith, Ashburton district, Western Australia.

Found 1913.

Iron. Medium octahedrite.

A mass of 161 kg., of irregular triangular shape, was found in $116^{\circ} 10' E.$ and $22^{\circ} 30' S.$, about 80 miles S.E. of Onslow: described by W. M. Foote and analysed by J. E. Whitfield (Amer. Journ. Sci., 1914, vol. 37, p. 391),

Ni = 9.45% ($n = 9\frac{1}{2}$). Another mass of 364 lb., found in 1914, was analysed by E. S. Simpson (Bull. Geol. Surv. Western Australia, 1916, no. 67, p. 140), Ni = 9.18% ($n = 10$).

*10 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [1914,1570], a slice, 1048 grams; [1919,44], a slice, 145 grams.

Mount Hicks, v. Mantos Blancos.

Mount Joy, Adams County, Pennsylvania, U.S.A

Found 1887.

Synonyms: Adams County; Gettysburg.

Iron. Coarsest octahedrite.

A mass of 847 lb. was found 5 miles S.E. of Gettysburg: described by E. E. Howell and analysed by L. G. Eakins (Amer. Journ. Sci., 1892, vol. 44, p. 415), Ni = 4.81% ($n = 18$). Also partially analysed by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 11).

About 172 kg. in Vienna (Naturhist. Mus.), 35 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [83483], a slice, 730 grams.

***Mount Magnet**, Murchison Gold Field, Western Australia.

Found 1916.

Iron. Finest octahedrite.

A sickle-shaped mass of 36½ lb. was found (Ann. Prog. Rep. Geol. Surv. Western Australia for 1916, 1917, p. 26).

Main mass in Perth, Western Australia (Geol. Surv. Mus.).

Mount Ouray, v. Ute Pass.

Mount Stirling, York, South West Division, Western Australia.

Known 1892.

Iron. Coarse octahedrite.

A mass of about 200 lb. was found 25 miles S.E. of Mount Stirling (T. Cooksey, Rec. Australian Mus. Sydney, 1897, vol. 3, pp. 58, 131). Analysed by H. Bowley (E. S. Simpson, Bull. Geol. Surv. Western Australia, 1916, no. 67, p. 136), Ni = 6.72% ($n = 14$).

Main mass in Sydney (Australian Mus.).

Specimen: [83613], a slice, 1888 grams.

Mount Vernon, Christian County, Kentucky, U.S.A.

Known about 1868.

Stony-iron. Pallasite.

A mass of about 351 lb. was found about 7 miles N.E. of Hopkinsville, but was not recognised as meteoric until 1902 (G. P. Merrill, Amer. Geologist, 1903, vol. 31, p. 156). Described and analysed by W. Tassin (Proc. U.S. Nat. Mus. Washington, 1905, vol. 28, p. 213), $f = 33$, $n = 6$, m of olivine = 4. Partially analysed by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 12).

Main mass in Washington (U.S. Nat. Mus.).

Specimen: [1919,86], a slice, 1250 grams.

Mount Zomba, v. Zomba.

Moustel Pank, v. Oescl.

Mouza Khoorna, v. Supuhee.

Mow, v. Mhow.

Muchachos, v. Tucson.

Muddoor, Mysore, India.

Fell 1865, Sept. 21, 7 a.m.

Synonyms: Maddur; Mudoor; Mysore.

Stone. Spherical hypersthene-chondrite.

Two stones were seen to fall, after detonations, near Annay Doddi, Maddur taluq; one weighed about 2 kg., the other was broken in pieces (L. B. Bowring, Proc. Asiatic Soc. Bengal, 1865, p. 195). Analysed by F. Crook (Inaug.-Diss., Göttingen, 1868, p. 33), $f = 9$, $n = 7$, $m = 3$.

1½ kg. in Calcutta (Mus. Geol. Surv. India).

Specimen: [41019*], 410 grams.

Mudoor, v. Muddoor.

***Mühlau**, Innsbruck, Tyrol.

Found about 1877.

Synonym: Mecherburg.

Stone. Spherical chondrite to grey chondrite.

A stone of 5 grams was found between Weiherburg and Mühlau, probably soon after its fall (A. Brezina, Ann. Naturhist. Hofmus. Wien, 1887, vol. 2, p. 115).

Main mass in Vienna (Naturhist. Mus.).

Mukerop, v. Bethany.

Mullaittivu v. Mulletiwu.

***Mulletiwu**, Northern Province, Ceylon.

Fell 1795, April 13.

Synonyms: Carnavelpattu; Mullaittivu.

Stone. Spherical chondrite.

After detonations a shower of stones fell (E. F. F. Chladni, Feuer-Meteore, Wien, 1819, p. 262).

25 grams in Paris (Mus. d'Hist. Nat.) (Cat. Météorites Mus. d'Hist. Nat. Paris, 1909, p. 28).

Multan, v. Khairpur; Lodran.

Mungindi, County Benarba, New South Wales.

Found 1897.

Iron. Finest octahedrite.

Two masses of 62 lb. and 51 lb. respectively were found in Queensland, 3 miles N.N.E. of Mungindi, New South Wales (G. W. Card, Rec. Geol. Surv. New South Wales, 1897, vol. 5, p. 121). Described by H. A. Ward, with analysis by the firm of Marriner and Hoskins (Amer. Journ. Sci., 1898, vol. 5, p. 138, fig.). Also described by E. Cohen with analysis by R. Knauer (Meteoritenkunde, 1905, Heft 3, p. 268), Ni = 10.99% ($n = 8$).

Main masses in Sydney (Mining and Geol. Mus.).

Specimen: [83394], a slice, 368 grams.

Muonionalusta, Kiruna, Norrbotten, north Sweden.

Found 1906.

Iron. Fine octahedrite.

A mass of 7½ kg. was found 2½ miles W.S.W. of Kitkiojärvi in Muonionalusta: described by A. G. Högbom with analysis by R. Mauzelius (Bull. Geol. Inst. Upsala, 1908-1909, vol. 9, p. 229), Ni = 8.02% ($n = 11$).

Main mass in Upsala University (Geol. Inst.).

Specimen: [1911-195], a slice, 142½ grams.

Murcia, v. Cabeza de Mayo; Molina.

Murfreesboro, Rutherford County, Tennessee, U.S.A.

Found 1847.

Synonym : Rutherford County.

Iron. Medium octahedrite.

A mass of about 19 lb. was found a few miles from Murfreesboro (G. Troost, Amer. Journ. Sci., 1848, vol. 5, p. 351).

2½ kg. in Harvard University.

Specimen : [22427], 2790 grams.

***Murnpeowie**, South Australia.

Found 1909.

Iron.

A mass of 2520 lb. was found in the Beltana Pastoral Company's Murnpeowie Run, about 16 miles N.E. by E. of Mt. Hopeless (L. L. Smith, Amer. Journ. Sci., 1910, vol. 30, p. 264, figs.).

Main mass in Adelaide (Sch. Mines and Indust. Mus.).

Muroshna, v. Angara.**Murphy**, Cherokee County, North Carolina, U.S.A.

Found 1899.

Iron. Hexahedrite.

A mass of about 17 lb. was found 5 miles from Murphy (H. A. Ward, Amer. Journ. Sci., 1899, vol. 8, p. 225). Described by E. Cohen with analysis by J. Fahrenhorst (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 227), Ni = 5.52% ($n = 17$).

690 grams in Chicago (Field Mus. Nat. Hist.).

Specimen : [84552], 1521 grams.

Muskingum County, v. New Concord.***Myhee Caunta**, Ahmadabad, Bombay, India.

Fell 1842, Nov. 30, 4 p.m.

Stone. Intermediate (?) chondrite.

After detonations a "number of stones" fell between the villages of Jeetala and Mor Monree: they were broken up by natives and only a fragment was sent to the Bombay Geogr. Soc. (H. Giraud, Edinburgh New Phil. Journ., 1849, vol. 47, p. 55).

Mysore, v. Judesegeri; Muddoor.**Nagaria**, Fatehabad pargana, Agra district, United Provinces, India.

Fell 1875, April 24, 1½ hours after sunrise.

Synonyms : Agra; Nageria.

Stone. Eucrite.

A stone of about 26 lb. fell, but broke into fragments, and only about 20 grams were preserved (H. B. Medlicott, Journ. Asiatic Soc. Bengal, 1876, p. 220; F. Fedden, Cat. Meteorites, Indian Museum, Calcutta, 1880, p. 16).

Specimens : [51368], two fragments, 8½ grams; [63879], 4½ grams.

Nagaya, v. Nogoya.**Nageria**, v. Nagaria.

Nagy-Borové, Liptó, Czechoslovakia.

Fell 1895, May 9.

Synonym: Liptó.

Stone. Grey chondrite.

Date of fall recorded by A. Brezina (Ann. Naturhist. Hofmus. Wien, 1896, vol. 10, p. 307).

A complete stone of 184 grams in Chicago (Field Mus. Nat. Hist.).

Specimen: [84898], 53 grams.

Nagy-Diwina, v. Gross-Divina.**Nagy-Vázsony, Veszprém, Hungary.**

Found 1890.

Iron. Medium octahedrite.

A mass of about 2 kg. was found (A. Brezina, Ann. Naturhist. Hofmus. Wien, 1896, vol. 10, pp. 284, 356).

1½ kg. in Vienna (Naturhist. Mus.).

Specimens: [67446], 69 grams; [1921,20], 38 grams.

Nakhla, Abu Hommos, Alexandria, Egypt.

Fell 1911, June 28, 9 a.m.

Synonyms: Abdel Malek; El Nakhla el Baharia.

Stone. Nakhlite (diopside-olivine-achondrite).

About 40 stones, of total weight of about 40 kg. and varying in weight from 1813 grams to 20 grams, fell, after appearance of cloud and detonations (W. F. Hume, Cairo Scientific Journal, 1911, vol. 5, no. 59, p. 212; and J. Ball, Geol. Reports, Surv. Dept. (Egypt), Cairo, 1912, no. 25). Described and analysed by G. T. Prior (Mineral. Mag., 1912, vol. 16, p. 274), consists mainly of a green diopside ($m = 1\frac{1}{2}$), with some highly ferri-ferous olivine ($m = \frac{1}{2}$) and a little feldspar.

Specimens: [1911,369], 725 grams; [1911,370], four pieces, 255 grams; three complete stones—[1913,25], 641 grams; [1913,26], 313 grams; [1913,27], 110 grams.

Namaqualand, v. Bethany.**Nammianthal, South Arcot district, Madras, India.**

Fell 1886, Jan. 27.

Synonym: South Arcot.

Stone. Veined spherical chondrite.

A stone of about 4½ kg. was seen to fall after a loud report (H. B. Medlicott, Rec. Geol. Surv. India, 1886, vol. 19, p. 268).

1.3 kg. in Calcutta (Mus. Geol. Surv. India); over ¾ kg. in Paris (Mus. d'Hist. Nat.).

Specimen: [56916], 1615 grams, and fragments, 11 grams.

Nanjemoy, Charles County, Maryland, U.S.A.

Fell 1825, Feb. 10, noon.

Synonyms: Annapolis; Charles County; Maryland; Port Tobacco.

Stone. Spherical chondrite.

After a loud detonation, a stone of about 16½ lb. was seen to fall (S. D. Carver and W. D. Harrison, Amer. Journ. Sci., 1825, vol. 9, p. 351). Analysed by G. Chilton (*ibid.*, 1826, vol. 10, p. 131).

Nearly 1 kg. in Yale University.

Specimens : [11620], 293 grams; [33191], 32 grams.

Napoléonsville, v. Kernouvé.

***Naretha, Western Australia.**

Found 1915.

Stone. Grey chondrite (?).

A stone of 6 lb. was found (Ann. Rep. Geol. Surv. Western Australia for 1921, 1922, p. 53).

Main mass in Perth, Western Australia (Geol. Surv. Mus.).

Narraburra Creek, Temora, County Bland, New South Wales.

Found 1855.

Iron. Finest octahedrite.

A mass of about 71 lb. was found about 12 miles east of Temora (H. C. Russell, Journ. and Proc. Roy. Soc. New South Wales, 1890, vol. 24, p. 81). Described and analysed by A. Liversidge (*ibid.*, 1904, vol. 37, p. 234, 12 pls.), Ni = 9.74% ($n = 9$).

Main mass in Sydney (Australian Mus.).

Specimen : [86997], a slice, 1918 grams.

Nash County, v. Castalia.

Nashville, v. Drake Creek.

Nawapali, Sambalpur district, Central Provinces, India.

Fell 1890, June 6, 6 p.m.

Stone. Carbonaceous chondrite.

After appearance of fire-ball, three stones appear to have fallen : one which fell in the middle of the village of Nawapali broke into pieces and only three small fragments of about 30, 20, and 10 grams were preserved; the other two stones, said to be of the "size of a 9 lb. shot," were found in a field 500 yards distant and appear to have been taken away by the villagers (copy of letter, dated Dec. 28, 1896, from the District Superintendent of Police of Sambalpur, in Min. Dept., British Museum).

41 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [82968], 21 grams.

Nebraska, v. Fort Pierre.

Nedagolla, Vizagapatam district, Madras, India.

Fell 1870, Jan. 23, 7 p.m.

Synonym : Nidigullam.

Iron. Nickel-poor ataxite.

After appearance of a luminous meteor (moving from N. to S.) and detonations, a mass of about 10 lb. was seen to fall in a field near the village of Nedagolla (letter of J. Lee Warner of April 1, 1871, in Min. Dept., British Museum; and G. H. Saxton, Proc. Asiatic Soc. Bengal, 1870, p. 64). Described by E. Cohen and analysed by O. Sjöström (Ann. Naturhist. Hofmus. Wien, 1897, vol. 12, p. 119), Ni = 6.20% ($n = 15$).

Specimen : [51184], the main mass, 4198 grams, and pieces, 82 and 36 grams.

Nejd, v. Nejed.

Nejed, Central Arabia.

Found 1863.

Synonym : Wadej Banej Khaled.

Iron. Medium octahedrite.

A mass of 131 lb., said to have been seen to fall in the Wadee Bance Khâled during a thunderstorm in 1863, was in 1885 obtained from a Persian agent by the British Museum: this mass, which showed no signs of weathering, was described and analysed by L. Fletcher (*Mineral. Mag.*, 1887, vol. 7, p. 179), Ni = 7.40% ($n = 12$). In 1893 a second mass, of 137 lb., much weathered, was brought to the Museum by the same agent and was said to have been found in the same valley, three days after its fall during a thunderstorm (letters from J. M. Shemtoh and Hajee Ahmed Khan in *Min. Dept.*, British Museum). Both masses probably were only found and not seen to fall.

The main part of the second mass (48 kg.) in Chicago (*Field Mus. Nat. Hist.*).

Specimen: [56154], main part of the mass obtained in 1885, 58,160 grams (128½ lb.), and pieces, 512 grams.

Nellore, v. Yatoor.

Nelson County, Kentucky, U.S.A.

Found 1856.

Iron. Coarsest octahedrite.

A mass of 161 lb. was ploughed up (J. L. Smith, *Amer. Journ. Sci.*, 1860, vol. 30, p. 240; C. U. Shepard, *ibid.*, 1861, vol. 31, p. 459). Analysed by J. L. Smith (*l.c.*, p. 240), Ni = 6.11% ($n = 15$), and by — Manteuffel (E. Cohen, *Ann. Naturhist. Hofmus. Wien*, 1892, vol. 7, p. 153), Ni = 7.11% ($n = 13$).

25 kg. in Vienna (*Naturhist. Mus.*).

Specimens: [40872], 3820 grams; [36415], 284 grams; [32046], 237 grams.

Nenntmannsdorf, Pirna, Saxony.

Found 1872.

Synonym: Pirna.

Iron. Hexahedrite.

A mass of about 12½ kg. was found 2 ft. below the surface (F. E. Geinitz, *Sitzungsber. Naturwiss. Gesell. Isis in Dresden*, 1873, p. 4; and *Neues Jahrb. Min.*, 1876, p. 608). Described and analysed by E. Cohen (*Meteoritenkunde*, 1905, Heft 3, p. 69), Ni = 5.48% ($n = 17$).

Main mass (11½ kg.) in Dresden (*Min. Mus.*).

Specimen: [56840], 15½ grams.

Nerft, Courland, Latvia.

Fell 1864, April 12, 4.45 a.m.

Synonyms: Pohgel; Swajahn.

Stone. Veined intermediate hypersthene-chondrite.

After detonations, two stones fell, one of about 5½ kg. at the farmhouse Swajahn, and the other of about 4½ kg. at the farmhouse Pohgel, 700 yards distant (C. Grewing and C. Schmidt, *Arch. Naturk. Liv-, Est- u. Kurlands*, Ser. 1, *Min. Wiss. Dorpat*, 1864, vol. 3, p. 554). Described and analysed by A. Kuhlberg (*ibid.*, 1867, vol. 4, p. 2), $f = 6$, $n = 4$, $m = 3$. 7½ kg. in Dorpat University, 1½ kg. in Vienna (*Naturhist. Mus.*).

Specimens: [39711], Pohgel, 69½ grams; [1920,326], Swajahn, 97 grams.

Ness City, v. Ness County.

Ness County, Kansas, U.S.A.

Found 1894.

Synonyms: Kansada; Ness City.

Stone. Crystalline chondrite.

The earliest known stone of this fall was a coarsely brecciated one of about 21 lb. found in "November 1894 about $\frac{1}{2}$ mile S.W. of *Kansada*" (letter of H. A. Ward of Nov. 14, 1897, in Min. Dept., British Museum); the next stone was one of 417 grams found in 1897 in S.W. of Ness County (H. L. Ward, Amer. Journ. Sci., 1899, vol. 7, p. 233); later others were found including one ploughed up on April 10, 1899, seven miles south and 3 miles west of *Ness City* (label of H. A. Ward in Min. Dept., British Museum). Altogether 26 stones, varying in weight from 34 to 3467 grams, and of total weight of about 17 kg., were found (O. C. Farrington, Publ. Field Columbian Mus. Chicago, 1902, Geol. Ser., vol. 1, no. 11, p. 300). Analysed by J. E. Whitfield (G. P. Merrill, Amer. Journ. Sci., 1913, vol. 35, p. 517).

19 $\frac{1}{2}$ kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [83489], half of the *Kansada* stone, 2005 grams; [85493], a nearly complete stone, 433 $\frac{1}{2}$ grams; [84439], a nearly complete stone of *Ness City*, 193 grams.

Netschaëvo, Tula, Russia.

Found 1846.

Synonym: Tula.

Iron. Brecciated octahedrite, with silicate inclusions.

A mass of about 250 kg. was found in making a road, and was broken up and used for various purposes (J. Auerbach, Bull. Soc. Naturalist. Moscou, 1858, vol. 31, pt. 1, p. 331). Described by W. von Haidinger (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1860 (1861), vol. 42, p. 507), and analysed by J. Auerbach (Ann. Phys. (Poggendorff), 1863, vol. 118, p. 363). Iron analysed by C. Rammelsberg (Monatsber. Akad. Wiss. Berlin, 1870, p. 444), Ni(+Co) = 9.84% ($n = 10$).

1 kg. in Vienna (Naturhist. Mus.).

Specimens: [33952], 554 grams; [33930], 457 grams; [54644], 32 $\frac{1}{2}$ grams; [33953], 31.7 grams.

Newberry, v. Ruff's Mountain.

New Concord, Muskingum County, Ohio, U.S.A.

Fell 1860, May 1, 12.45 p.m.

Synonyms: Guernsey County, Muskingum County.

Stone. Veined intermediate hypersthene-chondrite.

After detonations and appearance of fire-ball, about 30 stones fell over an area of 10 by 3 miles; the largest stone weighed 103 lb., and the total weight was about 500 lb. (E. B. Andrews, E. W. Evans, D. W. Johnston, and J. L. Smith, Amer. Journ. Sci., 1860, vol. 30, pp. 103 and 296; also E. W. Evans, *ibid.*, 1861, vol. 32, p. 30). Described and analysed by J. L. Smith (*ibid.*, 1861, vol. 31, p. 87) and by A. Madelung (Inaug.-Diss., Göttingen, 1862, p. 41). Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 353), $f = 10$, $n = 8$.

The 103 lb. stone in Marietta College, 51 and 34 lb. stones in Amherst College.

Specimens: [47217], a nearly complete stone (no. 5 of J. L. Smith's list), 18,597 grams (41 lb.); [34617], 926 grams; [32052], 190 $\frac{1}{2}$ grams.

New Granada, v. Rasgata (under Santa Rosa).

New Jersey, v. Deal.

Newton County, v. Mincy.

Ngawi, Madioen, Java.

Fell 1883, Oct. 3, 5.15 p.m.

Synonyms : Karang Modjo; Madioen; Magetan.

Stone. Spherical hypersthene-chondrite.

After appearance of fire-ball and detonations, two stones fell, one of 1191 grams at Karang Modjo, and the other of 202 grams at Ngawi (E. H. von Baumhauer, Arch. Néerland. Sci. Nat. Haarlem, 1884, vol. 19, p. 175; J. Bosscha, *ibid.*, 1886, vol. 21, p. 177). The Ngawi stone was described and analysed by E. H. von Baumhauer (*l.c.*), $f = 3$, $n = 5$; the Karang Modjo stone was described by J. Bosscha (*l.c.*).

The Ngawi stone and the main mass of the other stone in Leiden (Geol. Min. Mus.).

Specimen : [83396], $51\frac{1}{2}$ grams.

N'Goureyma, Jenné, Massina, French West Africa.

Fell 1900, June 15.

Iron. Brecciated octahedrite.

A mass of $37\frac{1}{2}$ kg. which came into the possession of H. Minod of Geneva in 1901 is said to have fallen and penetrated 1 metre into the clayey soil : described and analysed by S. Meunier (Comptes Rendus Acad. Sci. Paris, 1901, vol. 132, p. 441); and by E. Cohen (Amer. Journ. Sci., 1903, vol. 15, p. 254, and Mitt. Naturwiss. Ver. Neu-Vorpommern u. Rügen, Greifswald, 1901, vol. 33, p. 145), $Ni = 9.26\%$ ($n = 9\frac{1}{2}$).

$1\frac{1}{2}$ kg. in Chicago (Field Mus. Nat. Hist.), nearly $\frac{3}{4}$ kg. in Paris (Mus. d'Hist. Nat.).

Specimen : [85693], a slice, 871 grams.

Niagara, Grand Forks County, north Dakota, U.S.A.

Found 1879.

Iron. Coarse octahedrite.

A small mass of 115 grams was found 2 miles S.E. of Niagara : described by H. L. Preston and analysed by J. M. Davison (Journ. Geol., Chicago, 1902, vol. 10, p. 518), $Ni = 7.37\%$ ($n = 12\frac{1}{2}$).

Specimen : [85428], 17 grams.

Nidigullam, v. Nedagolla.

Nikolaev, v. Bischtube.

***Nio**, west of Yamaguchi, Yoshiki, Suwō, Japan.

Fell 1897, Aug. 8, 10.30 p.m.

Stone. Spherical chondrite.

After appearance of fire-ball and detonations, two stones of 195 and 253 grams respectively, and probably others, were found (K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, p. 50).

Both stones in Tokyo (the larger in the Science College, the smaller in the Imperial Museum).

Niro, v. Verkhne Udinsk.

N'Kandhla, Zululand, Natal, South Africa.

Fell 1912, Aug. 1, 1.30 p.m.

Synonym : Zululand.

Iron. Medium octahedrite.

After detonations and appearance of trail of smoke, a mass of about 38 lb. was seen to fall on the Pokinyoni Hill, near the junction of the Buffalo and Tugela rivers: described and analysed by G. H. Stanley (South African Journ. Sci., 1914, vol. 10, p. 105, 4 pls.); Ni(+Co?) = 10.68%. Spectroscopic examination by J. Lunt (South African Journ. Sci., 1915, vol. 11 (for 1914), p. 243).

Specimen: [1921,17], the main mass, 17,150 grams (37½ lb.).

Nobleborough, Lincoln County, Maine, U.S.A.

Fell 1823, Aug. 7, 4.30 p.m.

Stone. Howardite.

After detonations and appearance of cloud, a stone of about 5 lb. fell and broke into pieces (P. Cleaveland, Amer. Journ. Sci., 1824, vol. 7, p. 170).

Very little preserved; 60 grams in Halle University in 1897.

Specimen: [35406], less than 1 gram.

Nochtuisk, Yakutsk, Siberia.

Found 1876.

Iron. Coarse octahedrite.

Only four fragments, weighing 4, 2, 1, 1 grams respectively, were found in the gold washings and came into the possession of A. Brezina who gives analysis, Fe = 84.90, Ni = 6.22, P = 0.39 (letter of A. Brezina, of April 10, 1901, in Min. Dept., British Museum).

Specimen: [85833], the largest piece found, 4 grams.

Nocoleche, Wanaaring, County Ularara, New South Wales.

Known 1895.

Iron. Medium octahedrite.

A mass of about 44 lb. was found 5 miles S.W. of Nocoleche Station (T. Cooksey, Rec. Australian Mus. Sydney, 1897, vol. 3, p. 51, 4 pls.).

Main mass in Sydney (Australian Mus.), 1 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [82747], a slice, 687 grams.

Nogaya, v. Nogoya.

Nogoya, Entre Rios, Argentina.

Fell 1879, June 30, evening.

Synonyms: Concepcion; Nagaya; Nogaya.

Stone. Carbonaceous hypersthene-chondrite.

After appearance of a luminous meteor, a stone of about 4 kg. fell (H. Websky, Sitzungsber. Akad. Wiss. Berlin, Math.-naturwiss. Kl., 1882, p. 395; E. H. Ducloux, Anal. Mus. Nac. Hist. Nat. Buenos Aires, 1914, vol. 26, p. 99). Described by G. A. Daubrèe (Comptes Rendus Acad. Sci. Paris, 1883, vol. 96, p. 1764) and analysed by C. Friedheim (Sitzungsber. Akad. Wiss. Berlin, Math.-naturwiss. Kl., 1888, p. 363) and by E. H. Ducloux (l.c., p. 104), $m = 2\frac{1}{2}$.

1.8 kg. in Berlin University, 221 grams in Vienna (Naturhist. Mus.), 210 grams in Paris (Mus. d'Hist. Nat.).

Specimens: [84191], 24 grams; [63925], 4 grams; [55125], 3 grams.

Nord-Brabant, v. Uden.

North Inch of Perth, v. Perth.

Nossi Bé for Nosy Ré, v. Pułtusk.

Noşy Bé, v. Pultusk.

Novo-Urei, Karamzinka, Nijni-Novgorod, Russia.

Fell 1886, Sept. 4, 7.15 a.m.

Synonyms : Alatyř; Krasnoslobodsk; Nowo-Urei; Urei.

Stone. Ureilite.

After appearance of light and detonations, three stones fell, one of 1.9 kg. on the left bank of the river Alatyř at Karamzinka, another on the right bank at Petrovka and was broken up and lost, and the third in a swamp to the south of the farm Novo-Urei and was also lost (Y. I. Simashko, Cat. Météorites, St.-Petersbourg, 1891, p. 49). Described and analysed by M. Jerofejev (Krofeev) and P. Latschinoff (Lachinov) (Verh. Russ. Min. Gesell. St. Petersburg, 1888, vol. 24, p. 263), $f = 5\frac{1}{2}$, $n = 26$, m of olivine = 5, m of pyroxene = 8. Y. I. Simashko (*l.c.*) says that the correct date of the fall, according to many witnesses, is Sept. 4 (not Sept. 22), and the locality as above and not Krasnoslobodsk, Penza, as usually given.

Main mass in Petrograd (Mus. Mining Inst.) in 1897.

Specimen : [63625], 22 grams.

Nowo-Urei, v. Novo-Urei.

Nuevo Leon, v. Coahuila.

***Nuleri, Central Division, Western Australia.**

Found in or before 1902.

Iron. Medium (?) octahedrite.

A mass of 120 grams was found 200 miles east of Mount Sir Samuel : described and analysed by E. S. Simpson (Bull. Geol. Surv. Western Australia, 1907, no. 26, p. 24), $Ni = 5.79\%$ ($n = 16$): also described by A. Brezina (*ibid.*, 1914, no. 59, p. 213).

Main mass in Perth, Western Australia (Geol. Surv. Mus.).

Nulles, Catalonia, Spain.

Fell 1851, Nov. 5, 5.30 p.m.

Synonyms : Barcelona; Tarragona; Vilabella.

Stone. Brecciated grey bronzite-chondrite.

After appearance of fire-ball and detonations, a great number of stones fell between the villages of Nulles, Vilabella, and Tarragona, but only a few were preserved; the largest stone weighed about 19½ lb. (R. P. Greg, Phil. Mag., 1862, vol. 24, p. 536, quoting from D. J. Barcells, Lithologia Meteorica, Barcelona, 1854, pp. 4, 28). Analysed by L. Escosura (D. J. Barcells, *l.c.*), $f = 25$, $n = 15$.

Main mass in Madrid (Mus. Cienc. Nat.).

Specimens : [85427], 23 grams; [35160], 4 grams.

Nurrah, v. Sitathali.

Nyons, v. Aubres.

Oakley, Logan County, Kansas, U.S.A.

Found 1895.

Stone. Crystalline bronzite-chondrite.

A stone of 61 lb. was ploughed up 1½ miles S.W. of Oakley : described by H. L. Preston, and iron analysed by J. M. Davison (Amer. Journ. Sci., 1900, vol. 9, p. 410), $f = 14$, $n = 8\frac{1}{2}$.

9 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [84814], a slice, 2495 grams.

Oaxaca, v. Misteca; Yanhuitlan.

Obernkirchen, Bückeberg, Rinteln, Hesse-Nassau, Germany.

Known before 1863.

Synonym: Bückeberg.

Iron. Fine octahedrite.

A mass of about 41 kg. was found in a quarry on the Bückeberg 15 ft. below the surface: recognised as meteoric in 1863 by W. Wicke and F. Wöhler (Ann. Phys. (Poggendorff), 1863, vol. 120, p. 509; Nachr. Gesell. Wiss. Göttingen, 1863, p. 364, fig.). Described by E. Cohen and analysed by J. Fahrenhorst (Ann. Naturhist. Hofmus. Wien, 1900, vol. 15, p. 366), Ni = 7.55% ($n = 12$).

Specimen: [36056], the main mass, 34,700 grams (76½ lb.), and smaller pieces, 350 grams.

Ober-Pfalz, v. L'Aigle.

Ocatilan, v. Toluca.

Ochansk, Perm, Russia.

Fell 1887, Aug. 30, 1 p.m.

Synonyms: Okhansk; Taborg; Taborskoie Selo; Tabory.

Stone. Brecciated spherical bronzite-chondrite.

After appearance of luminous meteor and detonations, a shower of stones, of total weight of about 500 kg., the largest weighing 115 kg., fell in the village of Tabory, near Okhansk (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1887, vol. 105, p. 987; D. I. Mendelyev, Chem. Centralblatt, Leipzig, 1887, p. 1571). Described by G. P. Merrill and analysed by J. E. Whitfield (Mem. Nat. Acad. Sci. Washington, 1919, vol. 14, mem. 4, p. 7), $f = 17$, $n = 13$.

Main masses (125 kg.) in Kazan University, 14 kg. in Petrograd (Mus. Mining Inst.) in 1897.

Specimens: [1922,157], 2703 grams; [1922,158], 2367 grams; [63549], 175 grams, and fragments, 17 grams.

Octibbeha County, v. Oktibbeha County.

Oczeretna, Lipovets, Kiev, Ukraine.

Found 1871.

Synonyms: Kiev; Lipovitz.

Stone. Veined grey chondrite.

A stone of about 4½ oz. (130 grams) was obtained by the British Museum from Count Ylinski in 1875: a label (signed H. Lazzerini) with it stated that it was found at Oczeretna in the spring of 1871. The stone is similar to stones of the Pultusk fall and is possibly identical.

Specimen: [48368], the nearly complete stone, 109 grams.

***Odessa**, Ector County, Texas, U.S.A.

Found before 1922.

Iron. Coarse octahedrite.

A mass of about 1 kg., cut from a larger mass, was described by G. P. Merrill and analysed by E. V. Shannon (Amer. Journ. Sci., 1922, vol. 3, p. 335), Ni = 7.25% ($n = 13$).

Odessa, v. Grossliebenthal.

Oesel Island, Esthonia, Baltic States.

Fell 1855, May 11, 3.30 p.m.

Synonyms: Kaande; Moustel Pank.

Stone. White hypersthene-chondrite.

After detonations, several stones appear to have fallen on the island and in the sea, but only about 6 kg. of fragments of one stone were preserved: described and analysed by A. Göbel (Arch. Naturk. Liv-, Ehst- u. Kurlands, Ser. 1, Min. Wiss. Dorpat, 1855, vol. 1, p. 447), $f = 12\frac{3}{4}$, $n = 5$, $m = 3\frac{1}{2}$.

Nearly $\frac{1}{2}$ kg. in Dorpat University.

Specimens: [33909a], 15 grams; [1920,327], 12 grams; [90272], 2 grams.

***Ó-Fehértó**, Nyiregyhaza, Szabolcs, Hungary.

Fell 1900, July 25.

Stone. Chondrite.

A stone of 3.2 kg. fell (F. Berwerth, Verzeichnis der Meteoriten, Naturhist. Hofmus. Wien, 1903, p. 72).

Main mass in Budapest (Hung. Nat. Mus.).

Oficina Angela for Angela, v. La Primitiva.

Ogi, Hizen, Kyushu, Japan.

Fell 1741, June 8, 11 a.m.

Synonyms: Hizen; Japan.

Stone. White bronzite-chondrite.

After sounds like thunder, four stones fell, one of about 5.6 kg., another of 4.6 kg., and the two others of about 2 kg. each: the two largest were for a long time among the offerings annually made in the temple in Ogi (K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, p. 34). Described by E. Divers and analysed by T. Shimidzu (Trans. Asiatic Soc. Japan, 1882, vol. 10, p. 199), $f = 17$, $n = 10$, $m = 5$.

The largest stone in Tokyo (Nabeshima family).

Specimen: [55256], the main mass of the second largest stone, 4175 grams, and pieces, 166 grams.

Oguchimura, v. Kyushu.

Ohaba, Alba Iulia (= Karlsburg), Transylvania.

Fell 1857, Oct. 11, 12.15 a.m.

Synonyms: Karlsburg; Veresegyhaza.

Stone. Veined grey bronzite-chondrite.

After appearance of fire-ball, followed by detonations, a stone of 16 $\frac{1}{2}$ kg. was found (J. L. Neugeboren, Verh. Mitt. Siebenbürg. Ver. Naturwiss. Hermannstadt, 1857, vol. 8, p. 229). Described by M. Hörnes and analysed by F. Bukeisen (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1858, vol. 31, p. 79).

Main mass (15 $\frac{3}{4}$ kg.) in Vienna (Naturhist. Mus.).

Specimens: [55530], 29 $\frac{3}{4}$ grams; [34588], 10 grams.

***Okano**, Sasayama, Tamba, Japan.

Fell 1904, April 7, 6.35 a.m.

Iron. Hexahedrite.

After appearance of fire-ball and detonations, a mass of 4742 grams was found (K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, p. 51). Described and analysed by M. Chikaslāge and T. Hiki (Mem. Coll. Sci. Eng. Kyōto Univ., 1912, vol. 5, no. 1, pp. 1-4, 3 pls. and fig. of fire-ball), Ni = 4.44% ($n = 21$).

Main mass in Kyōto University.

***Okechobee** Lake, Florida, U.S.A.

Found before 1916.

Stone. Spherical chondrite.

Fragments weighing about 1 kg. were brought up in a net some $\frac{3}{4}$ mile from the shore (G. P. Merrill, Proc. U.S. Nat. Mus. Washington, 1916, vol. 51, p. 525).

Okhansk, v. Ochansk.

Okniny, Krzemieniec, Wolyn, Poland.

Fell 1834, Jan. 8, 9.30 a.m.

Stone. Brecciated grey chondrite.

With the "usual phenomena," a stone of about 12 kg. fell (K. Wtorshetzskii, Schrift. Russ. Gesell. Min. St. Petersburg, 1842, vol. 1, p. lxxii), but only a little has been preserved.

110 grams in Vienna (Naturhist. Mus.), 65 grams in Berlin University.

Specimens: [35177], 6 grams; [35405], 1 gram.

Oktibbeha County, Mississippi, U.S.A.

Found about 1854.

Synonym: Octibbeha County.

Iron. Nickel-rich ataxite.

A mass of 5½ oz. (156 grams) was found in an Indian tumulus: described and analysed by W. J. Taylor (Amer. Journ. Sci., 1857, vol. 24, p. 293), Ni = 59.69%. Also analysed by E. Cohen (Ann. Naturhist. Hofmus. Wien, 1892, vol. 7, p. 146), Ni = 62.01% ($n = \frac{5}{8}$).

Very little known; 4 grams in Harvard University.

Specimen: [34595], less than a gram.

Old Fork, v. Jenny's Creek.

Oldham County, v. La Grange.

Ophir, v. Illinois Gulch.

Orange River (iron), South Africa.

Known 1855.

Synonym: Griqualand.

Iron. Medium octahedrite.

A mass of 328 lb., sent by a farmer of the Orange River district, was brought to London in August 1855, and was described and analysed by C. U. Shepard, who purchased it (Amer. Journ. Sci., 1856, vol. 21, p. 213).

Repository of main mass unknown; 283 grams in Chicago (Field Mus. Nat. Hist.).

Specimen: [32051], 95 grams.

***Orange River (stone), South Africa.**

Fell 1887, Sept. 8.

Synonym: Beaufort.

Stone. Veined intermediate chondrite.

A fragment of 8 grams of this doubtful stone in Vienna (Naturhist. Mus.) (A. Brezina, Die Meteoritensammlung Naturhist. Hofmus. Wien, 1895, p. 248).

Orava, v. Magura.

Orgueil, Montauban, Tarn-et-Garonne, France.

Fell 1864, May 14, 8 p.m.

Synonym: Montauban.

Stone. Carbonaceous chondrite.

After appearance of a luminous meteor and detonations, about 20 stones, the largest of the size of a man's head but most as large as a fist, fell over an area of 2 square miles (G. A. Daubrée, Comptes Rendus Acad. Sci.

Paris, 1864, vol. 58, pp. 932, 1065; A. Laussedat, *ibid.*, vol. 58, p. 1100, and vol. 59, p. 74; G. Lespiault, *ibid.*, vol. 58, p. 1212; also P. A. Kessel-meyer, Ann. Phys. (Poggendorff), 1864, vol. 122, p. 654). Described by G. A. Daubrée (*l.c.*, p. 984). Analysed by S. Cloez (*ibid.*, 1864, vol. 58, p. 986, and vol. 59, p. 37), and by F. Pisani (*ibid.*, vol. 59, p. 132).

9½ kg. in Paris (Mus. d'Hist. Nat.).

Specimens: [36104], a complete stone, 480 grams; [36273], a complete stone, 132 grams; [1920,328], 6 grams.

Orléans, v. Charsonville; Lancé.

Ormes, v. Les Ormes.

Ornans, Doubs, France.

Fell 1868, July 11, 7.15 p.m.

Synonym: Salins.

Stone. Spherical chondrite.

After detonations, a stone of about 6 kg. fell and broke into two pieces (J. Marcon, Bull. Soc. Géol. France, 1868 (1869), vol. 26, p. 92). Described by G. A. Daubrée (*ibid.*, p. 95), and analysed by F. Pisani (Comptes Rendus Acad. Sci. Paris, 1868, vol. 67, p. 663).

3.7 kg. in Paris (Mus. d'Hist. Nat.).

Specimens: [42474], 1019 grams, and fragments, 5 grams; [1920,329], 1 gram.

Oroville, Butte County, California, U.S.A.

Found 1893.

Iron. Medium octahedrite.

A mass of 54 lb. was found (O. C. Farrington, Cat. Meteorites North America, Mem. Nat. Acad. Sci. Washington, 1915, vol. 13, p. 345; and letter of C. S. Bement of Oct. 18, 1894, in Min. Dept., British Museum).

Main mass in San Francisco (Acad. Sci.) in 1905.

Specimens: [84549], 311 grams; [77092], 62 grams.

Orvinio, Rome, Italy.

Fell 1872, Aug. 31, 5.15 a.m.

Synonym: Rome.

Stone. Black bronzite-chondrite (orvinite of Brezina).

After appearance of fire-ball and detonations, several stones appear to have fallen, of which six "fragments" were found; the total weight was 3.4 kg. and the largest piece weighed 1.2 kg. (P. Keller, Ann. Phys. (Poggendorff), 1873, vol. 150, p. 171; P. Secchi, Comptes Rendus Acad. Sci. Paris, 1872, vol. 75, p. 656). Described by G. Tschermak (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1875, vol. 70, Abt. 1, p. 459) and analysed by L. Sipőcz (Tschermaks Min. Mitt., 1874, p. 244), $f = 21$, $n = 9$, $m = 5$.

¾ kg. in Rome University, ½ kg. in Vienna (Naturhist. Mus.).

Specimens: [53930], 57¾ grams; [1920,330], 30 grams; [48750], 5¾ grams.

Oseuro Mountains, Socorro County, New Mexico, U.S.A.

Found 1895.

Iron. Coarse octahedrite.

Three pieces of about 3½, 3¼, and 1½ lb. were found in the eastern foothills: described and analysed by R. C. Hills (Proc. Colorado Sci. Soc., 1897, vol. 6, p. 30, 2 pls.), Ni = 7.66% ($n = 12$).

577 grams in Chicago (Field Mus. Nat. Hist.).

Specimen: [83981], a slice, 494 grams.

Ōshima, v. Kyushu.

Ostrolenka, v. Pultusk.

Otsago County, v. Burlington.

Ottawa, Franklin County, Kansas, U.S.A.

Fell 1896, April 9, 6.15 p.m.

Stone. Grey chondrite (howarditic chondrite of Brezina).

The fall was described in the *Ottawa Weekly Times* of April 16, 1896: the single stone of 840 grams which fell passed into the possession of C. S. Bemont (O. C. Farrington, *Cat. Meteorites North America*, Mem. Nat. Acad. Sci. Washington, 1915, vol. 13, p. 347; and letter of C. S. Bemont, of Oct. 18, 1897, in Min. Dept., British Museum).

109 grams in Chicago (Field Mus. Nat. Hist.).

Specimens: [83498], 89 grams; [1920,331], 65 grams.

Ottiglio, v. Cereseto.

Otumpa, Gran Chaco Gualamba, Argentina.

Found 1783.

Synonyms: Campo del Cielo; Gran Chaco; San Jago del Estero; Santiago del Estero; Tucuman; Wöhler's Iron (?).

Iron. Nickel-poor ataxite.

A mass estimated at about 15 tons was found by Don Rubin de Celis (*Phil. Trans. Roy. Soc. London*, 1788, vol. 78, pp. 37, 183; *L. Fletcher, Mineral. Mag.*, 1889, vol. 8, p. 229): in 1813 a mass of about 1400 lb. was brought to Buenos Aires and later was given to Sir Woodbine Parish, who presented it to the British Museum (Sir W. Parish, *Buenos Aires and the Provinces of La Plata*, London, 1839, p. 257, and also *Phil. Trans. Roy. Soc. London*, 1834, vol. 125*, p. 53). A full account and description of the iron is given by E. Cohen with analysis by O. Sjöström (*E. Cohen, Meteoritenkunde*, 1905, Heft 3, p. 35), Ni = 5.11% ($n = 18$). *Wöhler's Iron*, an ataxite of 114 grams of unknown locality in Wöhler's collection, was referred to Otumpa by A. Brezina, though doubtfully according to E. Cohen (*Ann. Naturhist. Hofmus. Wien*, 1898, vol. 13, p. 124): it was described and analysed by F. Wöhler in 1852 (*Ann. Chem. Pharm., Heidelberg*, 1852, vol. 81, p. 252), Ni = 7.38% ($n = 12\frac{1}{2}$).

2½ kg. in Paris (Mus. d'Hist. Nat.), 2 kg. in Copenhagen University.

Specimens: [61313], the main mass, 634,000 grams (1400 lb.); [90232], 514 grams; [1911,717], a slice, 181 grams: of Wöhler's Iron—[35164], 25 grams; and [63877], 4½ grams.

Quaregla, v. Haniet-el-Begucl.

Oude, v. Dyalpur; Kaeë.

***Oviedo, Asturias, Spain.**

Fell 1856, Aug. 5, 5.45 p.m.

Stone. White chondrite.

After detonations, stones fell of which three fragments of 105, 50, 50 grams were recovered: described and analysed by J. R. de Luanco (*Rev. Progr. Ciencias Exactas, Físicas y Naturales*, Madrid, 1867, vol. 17, p. 159).

16 grams in Madrid (Mus. Cien. Nat.), 14 grams in Paris (Mus. d'Hist. Nat.).

Oviedo, v. Cangas de Onis.

Owens Valley, Inyo County, California, U.S.A.

Found 1913.

Iron. Medium octahedrite.

A mass of 425 lb. was found 22 miles N.E. of Big Pine: described by G. P. Merrill with analysis by S. R. Brinkley (Mem. Nat. Acad. Sci. Washington, 1922, vol. 19, mem. 4, pp. 1-7, 2 pls.), Ni = 7.65% ($n = 11\frac{1}{2}$), contains traces of Pt and Ir, but not of other Pt metals, Au, or Sn.

Main mass in Washington (U. S. Nat. Mus.).

Oyada, v. Gifu.

Oyinchimura for Oguchimura, v. Kyushu.

Pacula, Jacala, Hidalgo, Mexico.

Fell 1881, June 18, morning.

Synonyms: Hidalgo; Jacala.

Stone. Brecciated white chondrite.

Three pieces were recovered, weighing together about 3.4 kg., and the largest 2 kg. (A. Castillo, Cat. Météorites Mexique, Paris, 1889, p. 12).

797 grams in New York (Amer. Mus. Nat. Hist.), 266 grams in Vienna (Naturhist. Mus.).

Specimen: [67455], 28 grams.

Paderborn, v. Hainholz.

Paiksha, v. Dokachi.

Palézieux, v. Chervettaz.

Pallas Iron, v. Krasnojarsk.

***Pampa de Agua Blanca**, Chile.

Stone.

9 grams of much oxidized fragments are in the Field Museum, Chicago, but nothing is known of its history (O. C. Farrington, Cat. Meteorites Field Mus. Nat. Hist. Chicago, 1916, p. 287).

Pampa de Tamarugal, v. Tamarugal.

Pampanga, Philippine Islands.

Fell 1859, April 4.

Synonyms: Mexico; Philippine Islands.

Stone. Brecciated grey chondrite.

A stone fell near the village of Mexico: original weight unknown; 169 grams in collections (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 232). A piece weighing about 115 grams was sent to Paris and was described by G. A. Daubrée (Comptes Rendus Acad. Sci. Paris, 1868, vol. 66, p. 637).

115 grams in Paris (Mus. d'Hist. Nat.).

Specimens: [1922,242], 7 grams; [41107], 11½ grams.

Pan de Azucar, Desert of Atacama, Chile.

Found 1887.

Iron. Coarse octahedrite.

A mass of about 43 lb. was found in Lat. 26° 30' S., about 67 miles from the port of Pan de Azucar (letter of May 3, 1894, from P. H. Scholberg to F. H. Butler, in Min. Dept., British Museum).

Specimen: [76808], the main mass obtained from F. H. Butler, 19,280 grams (42½ lb.), and 9 pieces, 114 grams.

Panganur, v. Moradabad.

Papasquiaro, v. Bella Roca.

Parjabatpur, v. Bishunpur.

Park Hotel, v. Bald Eagle.

Parma, v. Borgo San Donnino.

Parnallee, Madura district, Madras, India.

Fell 1857, Feb. 28, noon.

Stone. Veined grey hypersthene-chondrite.

After detonations, two stones, one of about 134 lb. and the other of 37 lb., were seen to fall (J. L. Cassels, *Amer. Journ. Sci.*, 1861, vol. 32, p. 401). Described by N. S. Maskelyne (*Phil. Mag.*, 1863, vol. 25, p. 438) and by W. von Haidinger (*Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1861, vol. 43, Abt. 2, p. 307; and 1863, vol. 47, Abt. 2, p. 420). Analysed by E. Pfeiffer (*ibid.*, 1863, vol. 47, Abt. 2, p. 460), $f = 6\frac{1}{2}$, $n = 5$, $m = 4$.

2½ kg. in Yale University, 2 kg. in Cleveland (Adelbert College).

Specimens: [34792], the main mass of the larger stone, 60,550 grams (133½ lb.); a piece, 244 grams, and fragments, 11 grams; [40876], part of the smaller stone, 132 grams; [1920,332], 40 grams; [33893], 15 grams.

Pau, v. Beuste.

***Paulding County, Georgia, U.S.A.**

Found about 1901.

Iron. Coarse octahedrite.

A mass, of which oxidized fragments weighed 725 grams, was found: described by T. L. Watson with analysis by W. M. Thornton (*Amer. Journ. Sci.*, 1913, vol. 36, p. 165), Ni = 6.34% ($n = 15$).

Pavlodar, Semipalatinsk, Siberia.

Found 1885.

Synonyms: Jamysheva; Semipalatinsk.

Stony-iron. Pallasite.

A mass of 4½ kg. was found near the village Jamysheva (Yamysheva) (*Bull. Acad. Sci. St.-Petersbourg*, 1898, vol. 8, no. 4, p. xliii.). The olivine crystals were described by P. V. Jeremejev (Eremyeev) (*Abst. in Zeits. Kryst. Min.*, 1900, vol. 32, p. 424). Analysed by I. A. Antipov (*Bull. Acad. Sci. St.-Petersbourg*, 1898, vol. 9, no. 1, p. 91), $f = 11$, m of olivine = 5.

In 1897, 2 kg. in Y. I. Simashko's Collection, 622 grams in Petrograd (*Mus. Acad. Sci.*).

Specimens: [63550], 58 grams; [1920,335], 10 grams.

Pavlograd, Ekaterinoslav, Ukraine.

Fell 1826, May 19.

Synonyms: Ekaterinoslav; Mordvinovka.

Stone. White chondrite.

A stone of about 40 kg. is said to have fallen in a field of Frau Sorbinov (K. E. A. von Hoff, *Ann. Phys. (Poggendorff)*, 1830, vol. 18, p. 185, from *Arch. découvertes*, Paris, 1826, p. 186). Whether any specimens in collections really came from such a stone is by no means certain; they are all very similar to Bachmut (see W. von Haidinger, *Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1863, vol. 46, Abt. 2, p. 307; and R. P. Greg, *Phil. Mag.*, 1862, vol. 24, p. 538).

932 grams in Dorpat University, 681 in Budapest (*Hung. Nat. Mus.*), 445 grams in Vienna (*Naturhist. Mus.*).

Specimens: [90264], 161 grams; [1920,334], 1 gram; [46011], less than a gram.

Pavlovka, Balashev, Saratov, Russia.

Fell 1882, Aug. 2, 5 p.m. •

Synonym : Saratov.

Stone. Howardite.

A stone of about 2 kg. fell, after detonations (T. Tschernyschow (Chernyshev), Zeits. Deutsch. Geol. Gesell., 1883, vol. 35, p. 190).

285 grams in Budapest (Hung. Nat. Mus.).

Specimen : [55255], 74 grams.

Pawlodar, etc., v. *Pavlodar*, etc.

Pegu, v. *Quenggouk*.

Penkarring Rock, v. *Youndegin*.

Pennyman's Siding, v. *Middlesbrough*.

***Peramiho**, Ungoni, Tanganyika Territory, East Africa.

Fell 1899, Oct. 24, 7 a.m.

Stone. Eucrite.

After detonations and appearance of light, a stone of 165 grams was found : described by F. Berwerth with analysis by E. Ludwig (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1903, vol. 112, Abt. 1, p. 739, figs.)

$m = \frac{2}{3}$.

Stone in Vienna (Naturhist. Mus.).

Perry Meteor, v. *Estherville*.

***Perryville**, Perry County, Missouri, U.S.A.

Found 1906.

Iron. Finest octahedrite.

A stone of 17½ kg. was found : described by G. P. Merrill with analysis by J. E. Whitfield (Proc. U.S. Nat. Mus. Washington, 1912, vol. 43, p. 595).

Main mass in Washington (U.S. Nat. Mus.).

***Persimmon Creek**, Cherokee County, North Carolina, U.S.A.

Found 1903.

Iron. Granular finest octahedrite.

A mass of about 5 kg. was found : described and analysed by W. Tassin (Proc. U.S. Nat. Mus. Washington, 1904, vol. 27, p. 955), $Ni + Co = 14.5\%$ ($n = 6$). Also described by E. Cohen (Mitt. Naturwiss. Ver. Neu-Vorpommern u. Rügen, Greifswald, 1903, vol. 32, p. 58), and by C. Klein (Sitzungsber. Akad. Wiss. Berlin, 1904, vol. 32, p. 572). The date of find is given by W. Tassin as 1893 and by O. C. Farrington (Cat. Meteorites Field Mus. Nat. Hist. Chicago, 1916, p. 288), as 1903.

Main mass in Washington (U.S. Nat. Mus.).

Perth, Scotland.

Fell 1830, May 17, 12.30 p.m.

Synonym : North Inch of Perth.

Stone. Intermediate chondrite.

A stone, 7 in. in diameter, fell at Perth in a field known as the North Inch of Perth ; only two small pieces weighing together about 2 grams appear to have been preserved (N. S. Maskelyne, Phil. Mag., 1863, vol. 25, p. 437 ; Rec. Geol. Surv. India, 1868, vol. 1, p. 72) : they were in the collection of Dr. Thomson of Glasgow, but passed into the possession of Mr. William Nevill of Godalming, by whom one was presented to the British Museum and the other to the Geol. Surv. Museum in Calcutta.

Specimen : [34248], 1½ grams.

Perugia, v. *Assisi*.

Petersburg, Lincoln County, Tennessee, U.S.A.

Fell 1855, Aug. 5, 3.30 p.m.

Synonyms : Fayetteville; Lincoln County.

Stone. Howardite.

After detonations, a stone of about 4 lb. was seen to fall (J. M. Safford, Geol. Recon. Tennessee, Nashville, 1856, p. 125). Analysed by J. L. Smith (Amer. Journ. Sci., 1861, vol. 31, p. 264), $m = \frac{3}{8}$.

214 grams in Chicago (Field Mus. Nat. Hist.).

Specimens : [32053], two pieces, $33\frac{1}{2}$ and 15 grams; [1920,333], 0.2 gram.

Petrovavlovsk, Mrasa River, Tomsk, Siberia.

Found 1841.

Iron. Medium octahedrite.

A mass of about 7 kg. was found $31\frac{1}{2}$ ft. deep in gold-bearing alluvium (A. Erman, Arch. Wiss. Kunde Russland, Berlin, 1841, vol. 1, pp. 314, 723). Analysed by — Ivanov (*l.c.*, p. 723), Ni = 6.98% ($n = 13$).

7 kg. in Petrograd (Mus. Mining Inst.) in 1897.

Specimen : [56472], 12 grams.

***Pevensey, Old Man Plain, County Waradgery, New South Wales.**

Found 1868–1870.

Synonym : Hay.

Stone.

A stone of $9\frac{1}{2}$ lb. was found in a paddock, 10 miles from Hay and 15 miles south of the Murrumbidgee River (C. Anderson, Rec. Australian Mus. Sydney, 1913, vol. 10, no. 5, p. 59). Perhaps identical with Eli Elwah.

Main mass in Godfrey Collection, Melbourne.

Philadelphia Iron, v. Cleveland.

Philippine Islands, v. Pampanga.

Phillips County, v. Long Island.

Phu-Hong, v. Phu-Long.

***Phu-Long, Binh-Chanh, Cochin China.**

Fell 1887, Sept. 22.

Synonym : Phu-Hong.

Stone. Veined spherical chondrite.

A nearly spherical stone, 0.10 metre in diameter and weighing about $\frac{1}{2}$ kg., fell (F. J. Delauney, Comptes Rendus Acad. Sci. Paris, 1887, vol. 105, p. 1294). Described and analysed by S. Meunier (*ibid.*, 1889, vol. 109, p. 875).

Complete stone in Paris (Mus. d'Hist. Nat.).

Piacenza, v. Borgo San Donnino.

***Pickens County, Georgia, U.S.A.**

Found 1908.

Stone. Crystalline chondrite.

A stone of 14 oz. (400 grams) was found (S. W. McCallie, Science, New York, 1900, vol. 30, p. 772). Described by O. C. Farrington and analysed by E. Everhart (S. W. McCallie, *l.c.*).

380 grams in Chicago (Field Mus. Nat. Hist.).

Piedmont, v. Alessandria; Cereseto; Motta di Conti.

Pila, v. Rancho de la Pila.

Pillistfer, Livonia, Latvia.

Fell 1863, Aug. 8, 12.30 p.m.

Synonyms: Aukoma; Kurla; Sawiauk; Wahhe.

Stone. Crystalline enstatite-chondrite.

After detonations, several stones fell, and four were found, at Aukoma, Kurla, Wahhe, and Sawiauk, weighing respectively about 14, $7\frac{1}{2}$, $1\frac{1}{2}$, and $\frac{1}{2}$ kg. (G. Rose, Monatsber. Akad. Wiss. Berlin, 1863, p. 441). Analysed by C. Grewingk and C. Schmidt (Arch. Naturk. Liv-, Ehst.- u. Kurlands, Ser. 1, Min. Wiss. Dorpat, 1864, vol. 3, p. 425), $f = 21\frac{1}{2}$, $n = 10$, $m = 30$, contains oldhamite.

20 $\frac{1}{2}$ kg. in Dorpat University, 1.7 kg. in Vienna (Naturhist. Mus.).Specimens: [1920,337], Kurla, 187 grams; [56324], Aukoma, 143 $\frac{1}{2}$ grams; [36270], Aukoma, 13 $\frac{1}{2}$ grams.**Pine Bluff**, v. Little Piney.**Pipe Creek**, Bandera County, Texas, U.S.A.

Found 1887.

Synonyms: Bandera County; San Antonio.

Stone. Veined crystalline bronzite-chondrite.

A mass of about 30 lb. was found, 35 miles S.W. of San Antonio (A. R. Ledoux, Trans. New York Acad. Sci., 1888-9, vol. 8, p. 186). Analysed by G. F. Kunz (*ibid.*, p. 187), $f = 31$, $n = 10$.

Over 4 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [67588], 766 grams; [1920,338], 87 grams; [67216], 56 grams.

Piprassi, v. Butsura.***Piquetberg**, Cape Province, South Africa.

Fell 1881.

Stone. Veined spherical chondrite.

38 grams in Vienna (Naturhist. Mus.) (A. Brezina, Ann. Naturhist. Hofmus. Wien, 1887, vol. 2, Notizen, p. 115).

Pirganj, v. Pirgunje.**Pirgunje** (possibly Pirganj), Dinajpur district, Bengal, India.

Fell 1882, Aug. 29.

Synonyms: Dinagepur (for Dinajpur); Pirganj.

Stone. Veined white chondrite.

A stone of 842 grams, labelled "Pirgunje, 29.8.82," was sent from India to E. A. Pankhurst of Brighton by a man who had "no knowledge whatever of it or its antecedents" (letters of E. A. Pankhurst of May 12 and 15, and Nov. 3, 1889, in Min. Dept., British Museum).

Specimen: [64565], the main mass of the stone obtained from E. A. Pankhurst, 732 grams, and two pieces, 16 grams.

Pirna, v. Neuntmannsdorf.**Pirthalla**, Hissar district, Punjab, India.

Fell 1884, Feb. 9, 2.30 p.m.

Stone. Brecciated spherical chondrite.

After detonations, a stone of about 3 lb. was seen to fall 150 paces from the village of Pirthalla; three pieces of 510, 427, and 224 grams were preserved (H. B. Medlicott, Rec. Geol. Surv. India, 1885, vol. 18, p. 148).

471 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [56445], one of the three pieces, 427 grams.

***Pitts,** Wilcox County, Georgia, U.S.A.

Fell 1921, April 20, 9 a.m.

Iron. Octahedrite (with silicate inclusions).

After appearance of brilliant fire-ball, followed by detonations, four stones, of 57, 42½, 30, and 2 oz. respectively, fell over an area of 1 mile by ¼ mile : described by S. W. McCallie, with analysis by E. Everhart (Amer. Journ. Sci., 1922, vol. 3, p. 211), Ni = 6.67% ($n = 14$).

Pittsburg, Allegheny County, Pennsylvania, U.S.A.

Found about 1850.

Synonyms : Allegheny County ; Miller's Run.

Iron. Coarsest octahedrite.

A mass said to have been of about 292 lb. was ploughed up on Miller's Run ; the main mass was forged into a bar and only a small part (about 600 grams) has been preserved (B. Silliman, junr., Proc. Amer. Assoc., 1850, vol. 4, p. 37). Described by E. Cohen and analysed by O. Hildebrand (Mitt. Naturwiss. Ver. Neu-Vorpommern u. Rügen, Greifswald, 1903, vol. 35, p. 4), Ni = 5.89% ($n = 16$).

213 grams in Yale University.

Specimen : [35418], 208 grams.

Plainview, Hale County, Texas, U.S.A.

Found 1917.

Synonym : Hale County.

Stone. Veined intermediate chondrite.

About a dozen stones, of total weight of about 31 kg., were found in 1917 and later, the largest weighing 5½ kg. and the smallest 863 grams : described by G. P. Merrill (Proc. U.S. Nat. Mus. Washington, 1917, vol. 52, p. 419, figs. ; and 1918, vol. 54, p. 503, figs.) who suggests that the meteorite is a breccia of fragments of a veined intermediate and a spherical chondrite.

Three complete stones of 2½, nearly 3, and 4½ kg. in Washington (U.S. Nat. Mus.), a stone of 1.9 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens : [1919,328], a complete stone, 2793 grams ; [1919,143], 35 grams.

Plescowitz, v. Ploschkovitz.

Ploschkovitz, Litomerice, Bohemia.

Fell 1723, June 22, 2 p.m.

Synonyms : Bunzlau ; Liboschitz ; Plescowitz ; Ploškovice ; Reichstadt.

Stone. Brecciated spherical chondrite.

After detonations and appearance of cloud, 33 stones fell (P. M. S. Bigot de Morogues, Mémoire sur les Chutes des Pierres, Orleans, 1812, p. 86 ; — Rost, Samm. Natur- u. Medicin-, etc., Geschichten (Breslauer Sammlungen), Versuch 31, Leipzig, 1725, p. 44). The only reputed specimen of this fall was a fragment of 1½ oz. purchased by the British Museum in 1846 from H. Heuland : it contains less iron than Tabor (N. S. Maskelyne, Phil. Mag., 1863, vol. 25, p. 451).

Specimen : [19973], the fragment bought, from H. Heuland, 25½ grams.

Ploškovice, v. Ploschkovitz.

Plymouth, Marshall County, Indiana, U.S.A.

Found 1893.

Synonym : Marshall County.

Iron. Medium octahedrite.

A mass, measuring about $12\frac{1}{2} \times 7\frac{3}{8} \times 2$ in., was in 1893 ploughed up about 5 miles S.W. of Plymouth : previously in 1872 a larger pear-shaped mass about 4 ft. long and 3 ft. " in its widest diameter " had been found, but was afterwards buried and lost : described by H. A. Ward and analysed by J. M. Davison (Amer. Journ. Sci., 1895, vol. 49, p. 53), Ni = 8.55% ($n = 10$).

Main mass said to be in C. S. Bement's Collection (now in the Amer. Mus. Nat. Hist. New York).

Specimen : [76810], 445 grams.

***Pnompehn**, Cambodia, French Indo-China.

Fell 1868, June 20-30, 3 p.m.

Stone. White chondrite.

Three stones fell, one of which weighed about 2 lb. (Rep. Brit. Assoc., 1869, p. 276).

Only about 41 grams, in Paris (Mus. d'Hist. Nat.), appear to have been preserved.

Poblazon, v. Descubridora.*Pohgel*, v. Nerft.**Pohlitz**, Gera, Reuss, Germany.

Fell 1819, Oct. 13, 8 a.m.

Synonyms : Gera ; Köstritz ; Politz.

Stone. Veined white chondrite.

Some days after detonations had been heard, a stone of about 3 kg. was found between Politz and Langenberg (W. E. Braun, Ann. Phys. (Gilbert), 1819, vol. 63, p. 216).

736 grams in Gera (Gymnasium), 713 grams in Berlin University.

Specimen : [33961], 87 grams.

Poinsett Iron, v. Toluca.*Poitiers*, v. Vouillé.**Pokhra**, Basti district, Gorakhpur, United Provinces, India.

Fell 1866, May 27, 8.30 p.m.

Synonyms : Gorakhpur ; Pokra.

Stone. Crystalline bronzite-chondrite.

After detonations and appearance of fire-ball, a stone of about 12 oz. (350 grams) fell 6 miles E.S.E. of Bustee (Basti) at Pokhra (Lat. $26^{\circ} 43' N$. Long. $82^{\circ} 40' E$.) (Calcutta Museum label with British Museum specimen and copies of letters of F. Wigram of June 16 and July 4, 1866, in Min. Dept. British Museum ; O. Buchner, Ann. Phys. (Poggendorff), 1869, vol. 136 p. 458 ; and F. Fedden, Cat. Meteorites, Indian Museum, Calcutta, 1880, p. 23).

258 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [41020*], 46 grams.

Pokra, v. Pokhra.*Polanko*, v. Mejillones (iron).*Polen* (of J. J. Berzelius), v. Lenarto.*Politz*, v. Pohlitz.*Polk County*, v. Fisher.*Poltava* (of G. von Blöde), v. Kuleschovka ; Simbirsk (of P. Partsch).

Pollava (of P. Partsch), v. Slobodka.

Ponca Creek, Holt County, Nebraska, U.S.A.

Found 1863.

Synonyms: Dacotah; Dakota.

Iron. Coarsest octahedrite.

A mass of about 100 lb. was found in the Reservation of the Ponca Indians: described and analysed by C. T. Jackson (Amer. Journ. Sci., 1863, vol. 36, p. 259), Ni = 7.08% ($n = 13$).

Repository of the main mass unknown.

Specimen: [35963], 224 grams.

***Ponta Grossa**, Parana, Brazil.

Fell 1846, April.

Stone.

A stone of 667 grams is said to have fallen (O. A. Derby, Revista do Observatorio, Rio de Janeiro, 1888, p. 15). The stone appears to have been lost or was a pseudo-meteorite (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 404).

Ponte de Lima, v. São Julião.

Pooposo Estate, Bolivia.

Known 1910.

Iron. Coarse octahedrite.

A mass of this iron was obtained in 1910 by J. Böhm from a missionary who had brought it from Bolivia (letter of May 23, 1922, from R. Koechlin, in Min. Dept., British Museum).

Specimen: [1922,243], an etched slice, 26 grams.

Poplar Camp }
Poplar Hill } v. Cranberry Plains.

***Port Orford**, Rogue River Mts., Curry County, Oregon, U.S.A.

Found 1859.

Synonyms: Port Oxford; Rogue River Mts..

Stony-iron. Pallasite.

A mass, estimated at 10,000 kg. (10 tons), was said to have been found, but only about 4 grams in Vienna (Naturhist. Mus.) and fragments in Calcutta (Mus. Geol. Surv. India) are known to be preserved (O. C. Farrington, Cat. Meteorites North America, Mem. Nat. Acad. Sci. Washington, 1916, vol. 13, p. 358).

Port Oxford, v. Port Orford.

Port Tobacco, v. Nanjemoy.

***Portugal**.

Fell 1796, Feb. 19.

Stone.

A stone of 10 lb. is said to have fallen (E. Howard, Phil. Trans. Roy. Soc. London, 1802, vol. 92, p. 170), but nothing appears to have been preserved.

Potosi, v. Coahuila; Imilac.

Powder Mill Creek, v. Crab Orchard.

Prachin, v. Bohumilitz.

Prairie Dog Creek, Decatur County, Kansas, U.S.A.

Found 1893.

Synonyms: Decatur County; Smoky Hill River.

Stone. Spherical crystalline chondrite.

A stone of about 2.9 kg. was found about 1893 (H. L. Preston, *Amer. Journ. Sci.*, 1900, vol. 9, p. 412). Described by E. Weinschenk (*Tschermaks Min. Petr. Mitt.*, 1895, vol. 14, p. 471).

2.9 kg. in G. F. Kunz' Collection in 1897.

Specimen: [77096], 529 grams.

Prambanan, Surakarta, Java.

Known 1797.

Synonyms: Brambanan; Sörakarta; Surakarta.

Iron. Fine octahedrite.

After detonations and appearance of fire-ball, two masses were found; the smaller has been lost, the larger, described as measuring a metre cube, was brought from Prambanan to Surakarta in 1797; a piece of $\frac{1}{4}$ kg., sent to Amsterdam in 1866, was described by E. H. von Baumhauer (*Arch. Néerland. Sci. Nat. Haarlem*, 1866, vol. 1, p. 465). Described also by E. Cohen, and analysed by O. Sjöström (E. Cohen, *Meteoritenkunde*, 1905, Heft 3, p. 308), Ni = 9.39% ($n = 9\frac{1}{2}$); also analysed by C. L. Vlaanderen (*Natuurk. Tijdsch. Nederl. Ind., Batavia*, 1867, vol. 29, p. 268), Ni = 11.2% ($n = 8$). 106 grams in Budapest (*Hung. Nat. Mus.*) in 1897.

Specimens: [54645], 8 grams; [43203], $\frac{1}{2}$ gram.

Praestö, v. Mern.

Praskoles, v. Zebrak.

***Premier Downs, Nullarbor Plains, Eucla Division, Western Australia.**

Found 1911.

Iron. Medium octahedrite.

Two pieces of 112 and 116 grams respectively were found: described and analysed by E. S. Simpson and H. Bowley (*Bull. Geol. Surv. Western Australia*, 1912, no. 48, p. 87; and 1914, no. 59, p. 205), Ni = $7\frac{1}{2}\%$ ($n = 12$).

The two pieces in Perth, Western Australia (*Geol. Surv. Mus.*).

Pricetown, Highland County, Ohio, U.S.A.

Fell 1893, Feb. 13.

Synonyms: Highland County; Princetown.

Stone. White chondrite.

A stone of about 900 grams came into the possession of C. S. Bement, but no details of the fall have been published (O. C. Farrington, *Cat. Meteorites North America*, *Mem. Nat. Acad. Sci. Washington*, 1915, vol. 13, p. 361; and letters of C. S. Bement of Feb. 13, 1893, and Oct. 22, 1897, in *Min. Dept., British Museum*).

Main mass in New York (*Amer. Mus. Nat. Hist.*).

Specimen: [83499], $10\frac{1}{2}$ grams.

Prieska, v. Ratteldraai.

Primitiva, v. La Primitiva.

Princetown, v. Pricetown.

Puerta de Arauco, La Rioja, Argentina.

Known 1907.

Iron. Brecciated octahedrite.

A mass of $1\frac{1}{2}$ kg. was found (M. Kantor, Cat. Meteoritos, Rev. Mus. La Plata, 1920, vol. 25, p. 110, figs.). Analysed by E. H. Ducloux (*ibid.*, p. 111), Ni = 6.61% ($n = 14$).

Main mass (1.1 kg.) in La Plata Museum.

Pulaski County, v. Little Piney.

Pulsora, Ratlam State, Central India.

Fell 1863, March 16, afternoon.

Synonym : Rutlam (for Ratlam).

Stone. Brecciated intermediate chondrite.

After detonations, three stones fell, one weighing about $1\frac{1}{2}$ lb. (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1869, vol. 59, Abt. 2, p. 228).

512 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [43059], 48 grams.

Pultusk, Warsaw, Poland.

Fell 1868, Jan. 30, 7 p.m.

Synonyms : Lerici; Nosy Bé (?); Ostrolenka; Warschau.

Stone. Veined grey bronzite-chondrite.

After the appearance of a fire-ball followed by detonations, a shower of stones fell over an area of several square miles between Pultusk and Ostrolenka on the Narew; the number of stones was estimated at 100,000, the weights of individuals varying from 9 kg. to about a gram; a few were of 4 kg. and over 200 of 1 kg.; over 200 kg. are preserved in collections (K. Szymanski, Neues Jahrb. Min., 1868, p. 326; G. vom Rath, Festschr. Niederrhein. Gesell. Natur- u. Heilkunde 50 jähr. Jubiläum der Universität, Bonn, 1868 (Abst. in Neues Jahrb. Min., 1869, p. 80); W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1868, vol. 57, Abt. 2, p. 405; J. G. Galle, Abhand. Schles. Gesell. Vaterl. Kultur, 1868, p. 79. Analysed by G. vom Rath (*l.c.*), $f = 10$, $n = 13$, $m = 3\frac{1}{2}$; and by C. Rammelsberg (Monatsber. Akad. Wiss. Berlin, 1870, p. 445).

$31\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat.), 18.9 kg. in Bonn University, 15.8 kg. in Vienna (Naturhist. Mus.).

Specimens : [42424], a complete stone, 9095 grams (20 lb.); [41676], a complete stone, 3545 grams; [41677], a complete stone, 845 grams; [41678], a complete stone, 793 grams; [42296], 538 grams; [42297], 425 grams; [42298], $280\frac{1}{2}$ grams; [41680], half a stone, 256 grams; [42301], 158 grams; [42302], 145 grams; [41679], a complete stone, $139\frac{1}{2}$ grams; [42304], $111\frac{1}{2}$ grams; [42305], 108 grams; [42307], $102\frac{1}{2}$ grams; [42309], $82\frac{1}{2}$ grams; [42310], 76 grams; [42311], $74\frac{1}{2}$ grams; [42313]–[42339], 27 stones from 11 to 64 grams and of total weight 999 grams; [41681]–[41692], 12 small stones, in weight from 7 to 50 grams and of total weight 243 grams; [64524], two stones, $12\frac{1}{2}$ grams.

Other specimens which probably belong to Pultusk are : [85832], a piece of 8 grams, labelled by A. Brezina "*Lerici*, Spezia, Italien, gefallen 1868, I, 30, 7 p.m."; and [1922,298], a stone of 132 grams, said to have fallen on May 25, 1882, about 4 p.m., on the extreme north coast of *Nosy Bé*, Madagascar (letter of G. E.

- **Mason** of Nov. 26, 1883, in Min. Dept., British Museum), but as no substantiation of this statement could be obtained from the "Cabinet de l'administration de la Colonie de Nossi Bé," and the stone is very similar to Pultusk, it is probably one of the numerous stones of this fall. See also Oczeretna.

Puquios, Copiapo, Atacama, Chile.

Found 1885.

Iron. Medium octahedrite.

A mass of about 14½ lb. was found near Puquios : described by E. E. Howell and analysed by L. G. Eakins (Amer. Journ. Sci., 1890, vol. 40, p. 224), Ni = 9·83% ($n = 9$).

1·4 kg. in Vienna (Naturhist. Mus.).

Specimen : [66743], 176 grams.

Pusinsko Selo, v. Milena.

Putiwł, v. Botschetschki.

Putnam County, Georgia, U.S.A.

Found 1839.

Iron. Fine octahedrite.

A mass of 72 lb. was found (J. E. Willet, Amer. Journ. Sci., 1854, vol. 17, p. 331). Described by E. Cohen and analysed by R. Knauer and O. Bürger (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 343), Ni = 7·89% ($n = 11$).

Nearly 14 kg. in Amherst College, 2½ kg. in Harvard University.

Specimens : [90227], 89½ grams; [90228], 23 grams.

***Queensland (South), Australia.**

Found 1894.

Iron. Coarse octahedrite.

72 grams were in the Ward-Coonley Collection in 1904 (Cat Ward Coonley Coll. Meteorites, Chicago, 1904, p. 20).

Queensland, v. Thunda.

Quenggouk, Bassein district, Lower Burma.

Fell 1857, Dec. 27, 2.30 a.m.

Synonyms : Bassein; Pegu.

Stone. Spherical chondrite.

After appearance of fire-ball, and detonations, three stones of 2291, 1909½, 1844½ grams respectively were seen to fall (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1861, vol. 42, p. 301; and 1862, vol. 44, p. 637, coloured picture of fire-ball).

2½ kg. in Calcutta (Mus. Geol. Surv. India).

Specimens : [33764], 654 grams; [1920,336], 64 grams.

***Quesa, Enguera, Valencia, Spain.**

Fell 1898, Aug. 1, 9 p.m.

Iron. Fine octahedrite.

After appearance of fire-ball, and detonations, a mass of about 10½ kg. was found : described by F. Berwerth (Ann. Naturhist. Hofmus. Wien, 1909, vol. 23, p. 318, 4 pls.), and analysed by J. Fahrenhorst (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 306), Ni = 10·75% ($n = 8$).

Main mass (10·4 kg.) in Vienna (Naturhist. Mus.).

Quincy, Vienne, France.

Fell 1851, summer.

Stone. Brecciated grey chondrite.

Nothing appears to have been published on the fall of this stone (S. Meunier, *Météorites*, Paris, 1884, p. 241).

Only 31 grams known in collections; 10 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [56468], 10 grams.

***Quinn Canyon, Nye County, Nevada, U.S.A.**

Found 1908.

Iron. Medium octahedrite.

A mass of 1450 kg. was found 90 miles east of Tonopah : it is possibly part of the Nevada meteor of 1894 (Feb. 1, 10 p.m.) (Amer. Journ. Sci., 1909, vol. 28, p. 431, figs.). Described by O. C. Farrington with analysis by H. W. Nichols (Field Mus. Nat. Hist. Chicago, 1910, Publ. 145, Geol. Ser., vol. 3, no. 8, p. 169, figs.), Ni = 7.33% ($n = 12\frac{1}{2}$).

Main mass in Chicago (Field Mus. Nat. Hist.).

*Qutahar Bazar, v. Butsura.**Radford Furnace, v. Indian Valley.**Raepur, v. Sitathali.****Rafrüti, Emmenthal, Berne, Switzerland.**

Found 1886.

Iron. Ataxite.

A mass of 18.2 kg. was found in 1886, and possibly fell at the end of Oct. 1856 (E. von Fellenberg, *Centralblatt. Min.*, 1900, p. 152). Described by E. Cohen with analysis by O. Hildebrand (*Meteoritenkunde*, 1905, Heft 3, p. 80), Ni = 9.54% ($n = 9\frac{1}{2}$).

Main mass (17.8 kg.) in Berne (Naturhist. Mus.).

Rakovka, Tula, Russia.

Fell 1878, Nov. 20, 3 p.m.

Synonym : Tula.

Stone. Intermediate hypersthene-chondrite.

A stone about the size of a man's head fell (P. Grigoriev, *Zeits. Deutsch. Geol. Gesell.*, 1880, vol. 32, p. 417). Analysed by P. Grigoriev (*l.c.*), $f = 7$, $n = 4$, $m = 3\frac{1}{2}$.

896 grams in Moscow (Acad.), 536 grams in Vienna (Naturhist. Mus.).

Specimen : [53320], 372 grams.

*Rakowka, v. Rakovka.**Ramos, v. Bocas.**Rana, v. Dokachi.****Ranchapar, Jamtara, Santhal, Bihar, India.**

Fell 1917, Feb. 20, 8.30 a.m.

Stone.

Four pieces of 148, 140, 78 and 0.3 grams were obtained by the Calcutta Museum (H. H. Hayden, *Rec. Geol. Surv. India*, 1918, vol. 49, pt. 1, p. 8).*Ranchito, v. Bacubirito.*

Rancho de la Pila, Durango, Mexico.

Found 1882.

Synonyms: Durango (of P. Partsch); Guadalupe; Karavinský Iron (?); Pila.

Iron. Medium octahedrite.

A mass of $46\frac{1}{2}$ kg. was ploughed up at Rancho de la Pila, 9 leagues east of Durango (L. Häpke, Abhand. Naturwiss. Ver. Bremen, 1884, vol. 8, p. 513, and 1886, vol. 9, p. 358). The fragment from a mass in plain N.E. of Durango acquired in 1834 by Karavinsky for the Vienna Collection may belong here (L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 153; P. Partsch, Die Meteoriten, Wien, 1843, p. 113). Analysed by — Janke (L. Häpke, l.c., p. 514), Ni = 8.35% ($n = 11$).

Probably identical with Cacaria (L. Fletcher, l.c.).

Specimen: [55253], the main mass, 44,220 grams ($97\frac{1}{2}$ lb.), and pieces, 1364 grams.***Rancho de la Presa, Zenapecuaro, Michoacan, Mexico.**

Fell 1899.

Stone. Spherical chondrite.

3 grams in Chicago (Field Mus. Nat. Hist.) (O. C. Farrington, Cat. Meteorites Field Mus. Nat. Hist. Chicago, 1916, p. 291; and Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 86).

*Randolph County, v. Guilford County.**Rasgata, v. Santa Rosa.***Ratteldraai, Kenhardt County, Cape Province, South Africa.**

Found 1909.

Synonym: Prieska.

Iron. Coarse octahedrite.

A mass of 1210 lb. was found (letter of L. Perinquey of Jan. 7, 1916, in Min Dept., British Museum).

Main mass in Cape Town (South African Mus.).

Specimen: [1916,61], 226 grams.

Red River, Cross Timbers, Johnson County, Texas, U.S.A.

Found 1808.

Synonyms: Brazos; Cross Timbers; Gibb's Meteorite; Lonisiana; Texas.

Iron. Medium octahedrite.

A mass of about 1635 lb. and two smaller ones were found by Pawnee Indians about 1808, north by west of Natchitoches on the Red River in Lat. $32^{\circ} 7' N.$ and Long. $95^{\circ} 10' W.$: the large mass was brought to New York in 1810 (C. H., Amer. Journ. Sci., 1824, vol. 8, p. 218; Bruce's Amer. Mineral. Journ., 1814, vol. 1, pp. 124, 218). Described and analysed by B. Silliman, junr., and T. S. Hunt (Amer. Journ. Sci., 1846, vol. 2, p. 370), Ni = 8.46% ($n = 11$). Occluded gases determined by A. W. Wright (*ibid.*, 1876, vol. 11, p. 257).

Main mass in Yale University.

Specimens: [24002], 424 grams; * [46974], 83 grams; [34675], $\frac{1}{2}$ gram.*Red River, v. Wichita County.****Red Willow County, Nebraska, U.S.A.**

Found about 1899.

Iron. Medium octahedrite.

A mass of 2½ kg. was found (E. H. Barbour, Rep. Geol. Surv. Nebraska, Lincoln, 1903, vol. 1, p. 184, fig.).

Repository unknown.

Reed City, Osceola County, Michigan, U.S.A.

Found 1895.

Iron. Coarse octahedrite.

A mass of about 44 lb. was ploughed up: described by H. L. Preston and analysed by J. E. Whitfield (Proc. Rochester Acad. Sci., 1903, vol. 4, p. 89), Ni = 8.18% ($n = 11$).

Main mass in Michigan Agricultural College.

Specimen: [86426], a slice, 876 grams.

Reichstadt, v. Ploschkovitz.**Renazzo, Cento, Ferrara, Italy.**

Fell 1824, Jan. 15, 8.30 p.m.

Stone. Black chondrite.

After appearance of light, followed by three detonations, several stones fell, of which three were recovered, the largest weighing about 5 kg. (E. F. F. Chladni, Ann. Phys. (Poggendorff), 1825, vol. 5, p. 122).

441 grams in Bologna University.

Specimen: [41105], 15 grams.

Rensselaer County, v. Tomhannock Creek.**Retschki, v. Ryeckki.****Rhine Valley, v. Rhine Villa.****Rhine Villa, Rhine Valley, Adelaide, South Australia.**

Found 1900.

Synonym: Rhine Valley.

Iron. Medium octahedrite.

A mass of 3325 grams was found about 50 miles N.E. of Adelaide: described by G. A. Goyder and analysed by W. S. Chapman (Trans. Roy. Soc. South Australia, Adelaide, 1901, vol. 25, p. 14), Ni = 9.07% ($n = 10$).

Main mass was sent to Germany; 123 grams in Berlin University.

Specimen: [85824], a slice, 193 grams.

Richardton, Stark County, North Dakota, U.S.A.

Fell 1918, June 30, 10 p.m.

Stone. Veined spherical bronzite-chondrite.

After appearance of a luminous meteor, followed by detonations, several stones, of a total weight of 200 lb., the largest weighing about 18 lb., fell over an area of 9×5 miles between Richardton and Mott: described by T. T. Quirke and analysed by J. E. Whitfield (Journ. Geol., Chicago, 1919, vol. 27, p. 431, 2 figs.), $f = 20$, $n = 10$, visible copper recorded in the nickel-iron.

Specimens: four complete stones—[1920,508], 478 grams; [1920,510], 413 grams; [1920,509], 372.2 grams; [1920,511], 166 grams.

Richmond, Chesterfield County, Virginia, U.S.A.

Fell 1828, June 4, 8.30 a.m.

Stone. Crystalline spherical hypersthene-chondrite.

After detonations, a stone of about 4 lb. was seen to fall 7 miles S.W. of Richmond (J. H. Cocks, Amer. Journ. Sci., 1829, vol. 15, p. 195). Described and analysed by C. U. Shepard (*ibid.*, 1829, vol. 16, p. 191. and

- 1843, vol. 45, p. 102). Also analysed by C. Rammelsberg (Monatsber. Akad. Wiss. Berlin, 1870, p. 453), $f = 8$, $n = 7$, $m = 3\frac{1}{2}$.

605 grams in Yale University, 155 grams in Amherst College.

Specimens : [24006], 94 grams; [35411], 70 grams; [15149], $5\frac{1}{2}$ grams.

* **Rich Mountain**, Jackson County, North Carolina, U.S.A.

Fell 1903, June 30, 2 p.m.

Stone. Veined intermediate chondrite.

After appearance of fire-ball and detonations, a stone (perhaps several) fell, and a fragment of 668 grams was recovered: described by G. P. Merrill with analysis by W. Tassin (Proc. U.S. Nat. Mus. Washington, 1907, vol. 32, p. 241, fig.).

179 grams in Washington (U.S. Nat. Mus.).

Rincon de Caparrosa, v. Caparrosa.

Ring Meteorite, v. Tucson.

Rio Florido, v. Adargas.

Rio Grande do Sul, v. Santa Barbara.

Rio San Francisco do Sul, v. Santa Catharina.

Rittersgrün, v. Steinbach.

Robertson County, v. Coopertown.

Robinson Station, v. Cynthiana.

Roche-Servière, v. St. Christophe.

Rochester, Fulton County, Indiana, U.S.A.

Fell 1876, Dec. 21, 8.45 p.m.

Synonym : Fulton County.

Stone. Spherical chondrite.

After the passage eastward, for over a 1000 miles, of a cluster of luminous meteors over the States from Kansas to Ohio, and detonations, a stone of about 12 oz. (340 grams) fell 3 miles N.W. of Rochester (H. A. Newton, Amer. Journ. Sci., 1877, vol. 13, p. 166; C. U. Shepard, *ibid.*, p. 207; D. Kirkwood, Proc. Amer. Phil. Soc., 1877, vol. 16, p. 592). Described and analysed by J. L. Smith (Amer. Journ. Sci., 1877, vol. 14, p. 219).

75 grams in Harvard University.

Specimens : [53289], 8 grams; [1920,339], 1 gram.

Rock County, v. Mariaville.

Rockingham County, v. Deep Springs; Smith's Mountain.

Rockport, v. McKinney.

Rockwood, v. Crab Orchard.

Roda, Huesca, Spain.

Fell 1871, spring.

Synonym : Huesca.

Stone. Amphoterite (rodite).

A stone of about 400 grams fell: described by G. A. Daubrée and analysed by F. Pisani (Comptes Rendus Acad. Sci. Paris, 1874, vol. 79, pp. 1507, 1509), m of olivine = 2, m of pyroxene = 3.

125 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [54604], $7\frac{1}{2}$ grams.

Rodeo, Durango, Mexico.

Found 1852.

Iron. Fine octahedrite.

A mass of 97 lb. was found about 7 miles N.W. of Rodeo and was used as an anvil for many years : described by O. C. Farrington (Field Columbian Mus. Chicago, 1905, Publ. 101, Geol. Ser., vol. 3, no. 1, p. 1, pls.). Also described by E. Cohen and analysed by O. Bürger (Meteoritenkunde 1905, Heft 3, p. 297), Ni = 11.27% ($n = 8$).

Over 30 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [87036], a slice, 409 grams.

Roebourne, North West Division, Western Australia.

Found 1892.

Synonym : Hamersley, Hammersley.

Stone. Medium octahedrite.

A mass of 191½ lb. was found 200 miles S.E. of Roebourne and 8 miles from the Hamersley Range, in Lat. 22° 20' S., Long. 118° E. (H. A. Ward, Amer. Journ. Sci., 1898, vol. 5, p. 135). Analysed by the firm of Mariner and Hoskins (H. A. Ward, *l.c.*, p. 136), Ni = 8.33% ($n = 11$).

Nearly 40 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens : [83314], a slice, 1502 grams; [1920,340], a slice, 114 grams.

Rogue River Mts., v. Port Orford.

Rokičky, v. Brahin.

Rome, v. Orvinio.

Roquefort, v. Barbotan.

Rosario, Honduras.

Found 1896.

Synonym : Honduras.

Iron. Coarse octahedrite.

A mass of about 4 lb., in July, 1896, was brought to Mr. E. Schernikov at the Rosario mine by a native who had found it at a ranch called Rosario, about 50 miles from the mine (verbal communication from Mr. E. Schernikov in 1922). The main mass of 1567 grams is in the C. S. Bement Collection in the American Museum of Natural History, New York (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 21; O. C. Farrington, Cat. Meteorites North America, Mem. Nat. Acad. Sci. Washington, 1915, vol. 13, p. 386).

Specimen : [83614], four pieces, 117 grams.

Ross's Iron, v. Cape York.

Rowton, Wellington, Shropshire, England.

Fell 1876, April 20, 3.45 p.m.

Synonyms : Shropshire; Wellington.

Iron. Medium octahedrite.

After detonations had been heard, a mass of 7½ lb. was found in a hole 18 in. deep : described and analysed (including occluded gases) by W. Flight (Phil. Trans. Roy. Soc. London, 1882, vol. 173, p. 894), Ni = 8.58% ($n = 11$).

Specimens : [50062], the main mass, 3109 grams, and two small pieces.

Ruff's Mountain, Lexington County, South Carolina, U.S.A.

Found 1844.

Synonyms : Lexington County; Newberry.

Iron. Medium octahedrite.

A mass of 117 lb. was found (C. U. Shepard, Amer. Journ. Sci., 1850, vol. 10, p. 128). Analysed by J. E. Whitfield, (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1919, vol. 14, mem. 4, p. 10), Ni = 8.55% ($n = 10\frac{1}{2}$). Crystals of schreibersite were measured by E. T. Wherry (G. P. Merrill, *l.c.*, p. 10).

54 lb. in Amherst College.

Specimens: [90225], 334 grams; [25459], 165 grams; [1920,341], a slice, 73 grams.

***Ruschany, Slonim, Grodno, Poland.**

Fell 1894, Dec. 7.

Synonyms: Deretschin; Slonim.

A large meteorite is said to have fallen (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 404).

***Rushville, Franklin County, Indiana, U.S.A.**

Found 1866.

Synonym: Brookville.

Stone. Brecciated grey chondrite.

Main mass in New York (Amer. Mus. Nat. Hist.) (O. C. Farrington, Cat. Meteorites North America, Mem. Nat. Acad. Sci. Washington, 1915, vol. 13, p. 389).

Russel Gulch, Gilpin County, Colorado, U.S.A.

Found 1863.

Synonyms: Colorado; Gilpin County.

Iron. Fine octahedrite.

A mass of 29 lb. was found: described and analysed by J. L. Smith (Amer. Journ. Sci., 1866, vol. 42, p. 218), Ni = 7.84% ($n = 11\frac{1}{2}$). Also described by E. Cohen and analysed by O. Bürger (Meteoritenkunde, 1905, Heft 3, p. 360), Ni = 7.43% ($n = 12$).

11½ lb. in New York (Amer. Mus. Nat. Hist.).

Specimens: [40881], 143½ grams; [40882], 102 grams; [40883], 47½ grams.

Rutherford County, v. Colfax; Murfreesboro'.

Rutlam for Ratlam, v. Pulsora.

***Ryechki, Sumy district, Kharkov, Ukraine.**

Fell 1914, April 9, 1.30 p.m.

Synonyms: Ketschki; Retschki.

Stone. Grey hypersthene-chondrite.

After detonations, a stone of 7½ kg. was seen to fall, and another of about 5½ kg. was found about two miles to the north-west (N. I. Dyakov, Ann. Géol. Min. Russie, Kharkov, 1916, vol. 17, p. 99; and P. N. Chirvinsky, Mem. Soc. Naturalistes, Kiev, 1915, vol. 25, p. 13, 3 figs.). Analysed by V. N. Chirvinsky (*ibid.*, p. 21), $f = 6\frac{1}{2}$, $n = 6\frac{1}{2}$, $m = 3\frac{1}{2}$.

***Sabetmahet, near Balrampur, Gonda district, United Provinces, India.**

Fell 1885, Aug. 16, evening.

Stone. Crystalline spherical chondrite.

A stone of about 2½ lb. fell and was made an object of worship: only about 3 grams were secured (H. B. Medlicott, Rec. Geol. Surv. India, 1885, vol. 18, p. 237).

3 grams in Calcutta (Mus. Geol. Surv. India).

Saborzy, v. Zaborzika.

Sacramento Mountains, Eddy County, New Mexico, U.S.A

Found 1896.

Synonyms : Badger; Eddy County.

Iron. Medium octahedrite.

A mass of 523 lb. was found on the eastern slope of the Sacramento Mountains, 23 miles S.W. of Badger (W. M. Foote, *Amer. Journ. Sci.*, 1897, vol. 3, p. 65, 2 pls.; and H. L. Preston, *ibid.*, 1900, vol. 9, p. 284). Analysed by J. E. Whitfield (W. M. Foote, *l.c.*, p. 66), Ni = 7.86% ($n = 12$).

8.4 kg. in Chicago (Field Mus. Nat. Hist.), 4.4 kg. in Washington (U.S. Nat. Mus.), 4.3 kg. in Vienna (Naturhist. Mus.).

Specimens : [84267], a large slice, 14,030 grams; [81871], 20½ grams.

*Safford Meteorite, v. Morristown.**Saharanpur, v. Akbarpur.***St. Caprais-de-Quinsac, Gironde, France.**

Fell 1883, Jan. 28, 2.45 p.m.

Stone. Intermediate chondrite.

After appearance of "black cloud," and detonations, a stone of 282½ grams was seen to fall (G. Lespault and L. Forquignon, *Comptes Rendus Acad. Sci. Paris*, 1883, vol. 97, p. 1022).

140 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [55624], 9 grams.

***St. Christophe-la-Chartreuse, Roche-Servière, Vendée, France.**

Fell 1841, Nov. 5.

Synonyms : Bourhon-Vendée; Roche-Servière.

Stone. White hypersthene-chondrite.

After appearance of fire-ball and detonations, a stone of 5½ kg. fell (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1880, vol. 91, p. 30; and A. Lacroix, *Bull. Soc. Sci. Nat. Ouest France, Nantes, Sér. 2*, 1906, vol. 6, p. 81, figs.). Described by A. Lacroix and analysed by him and F. Pisani (*l.c.*), $f = 9½$, $n = 4½$, $m = 3$.

Main mass in Nantes Museum, 11 grams in Paris (Mus. d'Hist. Nat.).

St. Croix County }
St. Croix River } *v. Hammond.*

St. Denis-Westrem, Ghent, Belgium.

Fell 1855, June 7, 7.45 p.m.

Synonym : Ghent.

Stone. Veined spherical hypersthene-chondrite.

A stone of 700 grams was seen to fall without detonations (F. Duprez, *Bull. Acad. Roy. Belgique, Bruxelles*, 1855, vol. 22, pt. 2, p. 54; and W. von Haidinger, *Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1861, vol. 42, p. 9, 2 figs.). Analysed by C. Klement (*Bull. Mus. Roy. d'Hist. Nat. Belgique, Bruxelles*, 1886, vol. 4, p. 273), $f = 8$, $n = 6$, $m = 3½$.

326 grams in Vienna (Naturhist. Mus.), 189 grams in Ghent University in 1897.

Specimen : [34672], 1½ grams.

St. Elizabeth, v. Lucky Hill.

St. Francois County, Missouri, U.S.A.

Known before 1863.

Synonyms : Missouri ; South-East Missouri.

Iron. Coarse octahedrite.

A specimen weighing about $\frac{1}{2}$ lb. was found in 1863 by B. F. Shumard in the Museum of the St. Louis Academy of Sciences labelled "S. E. Missouri" (C. U. Shepard, Amer. Journ. Sci., 1869, vol. 47, p. 233). Later a larger mass of over 2½ kg. was found and became known as St. Francois County : described by E. Cohen with analysis by J. Fahrenhorst (Ann. Naturhist. Hofmus. Wien, 1900, vol. 15, p. 369), Ni = 6.97% ($n = 13$).

753 grams in Chicago (Field Mus. Nat. Hist.), 641 grams in Vienna (Naturhist. Mus.).

Specimens : [35414], S.E. Missouri, 102 grams ; [1920,353], St. Francois County, 4 grams.

St. Genevieve County, Missouri, U.S.A.

Found 1888.

Iron. Fine octahedrite.

A mass of 539 lb. was found in the extreme western portion of St. Genevieve County (H. A. Ward, Proc. Rochester Acad. Sci., 1901, vol. 4, p. 65). Analysed by J. E. Whitfield (H. A. Ward, *l.c.*, p. 66), Ni = 7.98% ($n = 11\frac{1}{2}$). Structure described by E. Cohen (Meteoritenkunde, 1905, Heft 3, p. 372).

About 107 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [84861], a slice, 6445 grams.

St. Germain-en-Puel, Vitré, Ille-et-Vilaine, France.

Fell 1890, July 4, 3.30 p.m.

Stone. Spherical chondrite.

After detonations, a stone of about 4 kg. fell in two portions 2 miles apart (S. Meunier, Comptes Rendus Acad. Sci. Paris, 1912, vol. 154, p. 1741).

Specimens : [1912,610], 113 grams ; [1920,342], a slice, 56 grams.

St. Mark's Mission Station, Transkei, Cape Province, South Africa.

Fell 1903, Jan. 3, 11 p.m.

Stone. Spherical chondrite.

A stone of 13.78 kg. was seen to fall after appearance of light and four detonations : described by E. Cohen and analysed by E. Klein (Ann. South African Mus. Cape Town, 1906, vol. 5, pt. 1, p. 1, 3 pls.).

Main mass in Cape Town (South African Museum).

Specimen : [1916,59], 102½ grams.

St. Mesmin, Aube, France.

Fell 1866, May 30, 3.45 p.m.

Stone. Brecciated intermediate hypersthene-chondrite.

After appearance of fire-ball, followed by three detonations, three stones were found, weighing respectively about 4.2, 2.2, and 1.9 kg. (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1866, vol. 62, p. 1305). Analysed by F. Pisani (G. A. Daubrée, *l.c.*, p. 1326), $f = 5\frac{1}{2}$, $n = 7$, $m = 3$.

6 kg. in Paris (Mus. d'Hist. Nat.), 3 kg. in Troyes Museum.

Specimens : [67590], 68 grams ; [40991], 35 grams ; [41427], 7 grams.

St. Michel, Finland.

Fell 1910, July 12, 7.25 p.m.

Stone. White hypersthene-chondrite.

After appearance of fire-ball followed by detonations, two stones of about 7 kg. and 10 kg. respectively were found: described and analysed by L. H. Borgström (Bull. Comm. Géol. Finlande, 1912, vol. 6, no. 34, 3 pls.), $f = 8\frac{1}{2}$, $n = 7$, $m = 3\frac{1}{2}$.

Main masses in Helsingfors (Geol. Kom.).

Specimen: [1913,145], 958 grams.

St. Nicholas, v. Mässing.

Saintonge, v. Jonzac.

Salem, v. Kakangari; Smithland.

Saline Township, Sheridan County, Kansas, U.S.A.

Found 1901; possibly fell 1898, Nov. 15, 9.30 p.m.

Stone. Crystalline spherical hypersthene-chondrite.

After appearance of fire-ball in 1898, a stone of about 68 lb. was found three years later: described by O. C. Farrington (Science, New York, 1902, vol. 16, p. 67; and Publ. Field Columbian Mus. Chicago, 1907, Geol. Ser., vol. 3, no. 6, p. 126). Analysed by H. W. Nichols and E. W. Tillotson (O. C. Farrington, *ibid.*, 1911, vol. 3, no. 9, Anal. 96), $f = 6$, $n = 4$, $m = 2$. Free phosphorus recorded in it by O. C. Farrington (Amer. Journ. Sci. 1903, vol. 15, p. 71).

22.9 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [1921,21], 218 grams; [86522], 167 grams.

Salins, v. Ornans.

Salitra, v. La Primitiva.

Salles, Villefranche, Rhône, France.

Fell 1798, March 12, 6 p.m.

Synonym: Villefranche.

Stone. Veined intermediate chondrite.

After appearance of a fire-ball moving from east to west, a stone of about 20 lb. fell and buried itself 18 in. in the soil (Marquis de Drée, A. Tillock's Phil. Mag., 1803, vol. 16, p. 217, from Journ. Physique, Paris, 1802, vol. 56, p. 383). Date of fall perhaps March 8, when a fire-ball moving in the same direction and at about the same hour was observed (P. Prevost, Journ. Physique, Paris, 1802, vol. 56, p. 465).

1½ kg. in Paris (Mus. d'Hist. Nat.).

Specimen: [90246], 165 grams.

Saltillo, v. Sanchez Estate (under Coahuila).

Salt Lake City, Utah, U.S.A.

Found 1869.

Synonyms: Echo; Utah.

Stone. Brecciated grey bronzite-chondrite.

A stone of 875 grams was found between Salt Lake City and Echo: described by E. S. Dana and analysed by S. L. Penfield (Amer. Journ. Sci., 1886, vol. 32, p. 226), $f = 17$, $n = 11$, $m = 4$.

834 grams in Yale University.

Specimen: [64343], 4½ grams.

Salt River, Bullitt County, Kentucky, U.S.A.

Found about 1850.

Iron. Finest octahedrite.

A mass of about 8 lb. was found about 20 miles south of Louisville, and

was heated in a forge (B. Silliman, junr., Proc. Amer. Assoc., 1850, vol. 4, p. 36). Described by E. Cohen and analysed by J. Fahrenhorst (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 275). Ni = 8.70% ($n = 10\frac{1}{2}$).

985 grams in Yale University, 304 grams in Harvard University.

Specimens : [35416], 463 grams; [34579], 61 grams.

Sáluká, v. Shalka.

Sams Valley, Jackson County, Oregon, U.S.A.

Found 1894.

Iron. Medium octahedrite.

A mass of 15½ lb. was found about 10 miles N.W. of Medford : described by W. M. Foote and analysed by J. E. Whitfield (Amer. Journ. Sci., 1915, vol. 39, p. 80, 4 figs.), Ni = 9.76% ($n = 9$).

Main mass secured by the Foote Mineral Co., sliced up, and distributed.

Specimen : [1919,42], a slice, 64 grams.

Samyscheva for Jamyscheva, v. Pavlodar.

San Albano, v. Valdinizza.

San Angelo, Tom Green County, Texas, U.S.A.

Found 1897.

Iron. Medium octahedrite.

A mass of 194 lb. was found 7 miles south of San Angelo : described by H. L. Preston with analysis by the firm of Mariner and Hoskins (Amer. Journ. Sci., 1898, vol. 5, p. 269), Ni = 7.86% ($n = 12$).

5.8 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [83612], a slice, 771 grams.

San Antonio, v. Kendall County; Pipe Creek.

San Bartolomé, v. Adargas.

San Bernardino County, v. Ivanpah; San Emigdio Mountains.

Sancha Estate }
Sanchez Estate } v. Coahuila.

San Cristobal, Antofagasta, Chile.

Found about 1882.

Synonym : Antofagasta.

Iron. Nickel-rich ataxite.

A mass of about 5 kg. was found : described by E. Cohen and analysed by O. Sjöström (Sitzungsber. Akad. Wiss., Berlin, 1898, p. 607; and E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 132), Ni = 25.60% ($n = 3$).

114 grams in Chicago (Field Mus. Nat. Hist.).

Specimens : [86764], 76½ grams; [86763], 69 grams.

Sandwich Islands, v. Honolulu.

San Emigdio Mountains, Kern County, California, U.S.A.

Known in 1887.

Synonym : San Bernardino County.

Stone. Spherical chondrite.

A stone of about 80 lb. was found and was crushed to pieces as an ore : described by G. P. Merrill and partially analysed by J. E. Whitfield (Proc. U.S. Nat. Mus. Washington, 1888 (1889), vol. 11, p. 161), $f = 6$, $n = 8$, m of pyroxene = 4. Locality given as Kern County, not San Bernardino County, by A. S. Eakle (Minerals of California, 1914, p. 22).

Only a little has been preserved; 527 grams in Washington (U.S. Nat. Mus.).

Specimen: [1919,88], 27 fragments, 33 grams.

San Francisco del Mezquital, Durango, Mexico.

Known before 1868.

Synonym: Mezquital.

Iron. Nickel-poor ataxite.

A mass of about $7\frac{1}{2}$ kg. was brought from Mexico by Gen. Castlenau (G. A. Daubré, Comptes Rendus Acad. Sci. Paris, 1868, vol. 66, p. 573; L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 154). Analysed by A. A. Damour (G. A. Daubré, l.c., p. 574), Ni = 5.89% ($n = 16$). Described by E. Cohen with analysis by J. Fahrenhorst (Meteoritenkunde, 1905, Heft 3, p. 48), Ni = 5.46% ($n = 17$).

Specimen: [43401], the main mass, 7095 grams, and pieces, 43 grams.

San Francisco do Sul, v. Santa Catharina.

San Francisco Pass, v. Barranca Blanca.

San Giovanni d'Asso, v. Siena.

San Gregorio, v. Morito.

San Jago del Estero, v. Otumpa.

San José, v. Heredia.

San Juliano, v. São Julião.

San Luis Potosi, v. Bocas; Charcas; Descubridora.

San Pedro de Atacama, v. Imilac; Vaca Muerta.

***San Pedro Springs, Bexar County, Texas, U.S.A.**

Found 1887.

Stone. White chondrite.

A specimen of 72 grams is mentioned in C. S. Bement's Catalogue of June 1894, and is now probably in New York (Amer. Mus. Nat. Hist.): 3 grams, from the Ward-Coonley Collection, in Chicago (Field Mus. Nat. Hist.) (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 62).

***San Sebastiano da Boa Vista, Brazil.**

Fell 1914.

An immense meteorite is said to have fallen (Fortschr. Min. Krist. Petr., Jena, 1922, vol. 7, p. 263, from Prometheus, 1915, vol. 26, p. 84).

***Santa Apolonia, Tlaxcala, Mexico.**

Found 1872.

Synonym: Apollonia.

Iron. Medium octahedrite.

A mass of about 1 kg. was stated by H. A. Ward to be in Mexico City (Mus. Inst. Geol.) (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 22).

212 grams in Chicago (Field Mus. Nat. Hist.), 130 grams in Berlin University.

Santa Barbara, Rio Grande do Sul, Brazil.

Fell 1873, Sept. 26.

Synonym: Rio Grande do Sul.

Stone. Grey chondrite (howarditic chondrite of Brezina).

A stone of about 400 grams fell (O. A. Derby, Amer. Journ. Sci., 1888, vol. 36, p. 157).

• About a quarter of the stone (93 grams) in Rio de Janeiro (Mus. Nac.).
Specimen : [65494], $1\frac{1}{4}$ grams.

Santa Catarina Mountains, v. Tucson.

Santa Catharina, Brazil.

Found 1875.

Synonyms : Morro do Rocio; Rio San Francisco do Sul; San Francisco do Sul.

Iron. Nickel-rich ataxite.

Large masses, of total weight of about 7000 kg. (about 7 tons), including six weighing respectively 2250, 1500, 450, 375, 300, 300 kg., were found in clay overlying granite on the island of São Francisco (— Lunay, *Comptes Rendus Acad. Sci. Paris*, 1877, vol. 85, p. 84; and O. A. Derby, *Science*, New York, 1892, vol. 20, p. 254). According to Guignet (*ibid.*, 1877, vol. 84, p. 1507) the total weight was as much as 25,000 kg. (about 25 tons), and most of it appears to have been sent to England to be smelted for nickel (E. A. Wülfing, *Die Meteoriten in Sammlungen*, Tübingen, 1897, p. 308). Analysed by A. A. Damour (*Comptes Rendus Acad. Sci. Paris*, 1877, vol. 84, p. 478), Ni = 33.97% ($n = 2$).

55 kg. in Paris (Mus. d'Hist. Nat.), 45 kg. in Vienna (Naturhist. Mus.).

Specimens : [52283], 6320 grams; [51833], 76 grams; [51369], $28\frac{1}{2}$ grams; [51834], 24 grams.

Santa Fé County, v. Glorieta Mountain.

Santa Giulietta, v. Alessandria.

Santa Rita, v. Tucson.

Santa Rosa, Tunja, Boyaca, Colombia, South America.

Found 1810.

Synonyms : Bogota; Colombia; New Granada; Rasgata; Tocavita; Zipaquira.

Iron. Ataxite to obscure brecciated octahedrite.

A large mass estimated at 750 kg. and smaller pieces were found on the hill of Tocavita, near Santa Rosa, in 1810, and in 1824 the large mass was being used as an anvil in Santa Rosa (Mariano de Rivero and J. B. Boussingault, *Ann. Chim. Phys.*, Paris, 1824, vol. 25, p. 438); in 1874 it was placed on a pillar in the market-place where it was seen in 1906 by H. A. Ward, who obtained a large piece (*Amer. Journ. Sci.*, 1907, vol. 23, p. 1). Two other masses of 41 kg. and 22 kg. respectively were found in 1810 at the village *Rasgata* near the saline of Zipaquira (Mariano de Rivero and J. B. Boussingault, *l.c.*, p. 442). Described by E. Cohen (*Ann. Naturhist. Hofmus. Wien*, 1894, vol. 9, p. 111, and 1899, vol. 13, p. 131) with analysis of Rasgata by — Mantouffel (Ni = 6.44%), and analyses by O. Sjöström of Rasgata (Ni = 6.70%), and of the large mass of Santa Rosa (Ni = 6.52%). Rasgata was also analysed by F. Wöhler (*P. Partsche, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1852, vol. 8, p. 500), Ni = 6.71% ($n = 14$). The etched figures of Santa Rosa and Rasgata are similar (G. T. Prior).

99 kg. of Santa Rosa in Chicago (Field Mus. Nat. Hist.), $5\frac{1}{2}$ kg. in Tübingen University, $1\frac{1}{4}$ kg. in Vienna (Naturhist. Mus.).

Specimens : [1907,132], a slice of Ward's Santa Rosa, 996 grams; [35185], obtained from G. Rose in 1863 and labelled Santa Rosa (Tocavita), $90\frac{1}{2}$ grams; [61306], from H. Heuland's specimen of Rasgata, $58\frac{1}{2}$ grams; [35409], obtained from C. U.

Shepard and labelled "Santa Rosa bei Tunga (from Humboldt)," 10½ grams; [90231], Santa Rosa, 4 grams.

Santa Rosa, v. Coahuila.

Santiago de Chile, v. Cobija.

Santiago del Estero, v. Otumpa.

São Julião de Moreira, Ponte de Lima, Minho, Portugal.

Known before 1883.

Synonym : Ponte de Lima.

Iron. Brecciated hexahedrite.

A mass of 162 kg. was ploughed up (A. Ben-Saude, Commun. Comm. Trab. Geol. Portugal, Lisbon, 1888 (1889), vol. 2, Fasc. 1, p. 14; ref. in Neues Jahrb. Min., 1888, Bd. 2, p. 371). Analysed by E. Cohen (Neues Jahrb. Min., 1889, Bd. 1, p. 213), Ni = 6.02% ($n = 15$).

162 kg., in 1897, in the possession of A. Brezina, 2½ kg. in Chicago (Field Mus. Nat. Hist.).

Specimens : [83315], two pieces, 719 and 25 grams; [1921,385], 139 grams; [68215], 9 grams.

Saonlod, v. Khetri.

Saratov, v. Pavlovka; Sarepta.

Sarbanovac, v. Soko-Banja.

Sarepta, Saratov, Russia.

Found 1854.

Synonyms : Saratov.

Iron. Coarse octahedrite.

A mass of about 14 kg. was found on the right bank of the Volga, 20 miles from Sarepta (J. Auerbach, Bull. Soc. Nat. Moscou, 1854, no. 4, p. 504). Described by W. von Haidinger (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1862 (1863), vol. 46, Abt. 2, p. 286, and 1864, vol. 49, Abt. 2, p. 497).

2 kg. in Berlin University, ¾ kg. in Vienna (Naturhist. Mus.).

Specimens : [33750], 223 grams; [33605(3)], 60½ grams.

Sáros, v. Lenarto.

Sarthe, v. Lucé.

Saskatchewan, v. Iron Creek.

Satsuma, v. Kyushu.

Sauguis, St. Étienne, Basses-Pyrénées, France.

Fell 1868, Sept. 7, 2.30 a.m.

Synonym : Mauléon.

Stone. Veined white chondrite.

After appearance of fire-ball, followed by detonations, a stone fell in a stream and was broken in pieces, of which a weight of about 2-4 kg. was collected (G. A. Daubrée, Comptes Rendus Acad. Sci. Paris, 1868, vol. 67, p. 873, with analysis by S. Meunier).

1 kg. in Paris (Mus. d'Hist. Nat.), 297 grams in Vienna (Naturhist. Mus.)

Specimens : [71572], 11 grams; [48758], 5 grams.

Saurette, v. Apt.

Savtschenskoje, Tiraspol, Kherson, Ukraine. *

[Fell 1894, July 27, 8 p.m.

Synonyms : Cherson (for Kherson); Sawtschenskoje.

Stone. Crystalline spherical chondrite.

After three detonations, a stone of about 2½ kg. was seen to fall (R. Prendel, *Mém. Soc. Nat. Nouvelle Russie*, Odessa, 1895, vol. 20, no. 1, p. 49).

Main mass in Odessa University.

Specimen : [83490], 62 grams.

Savchenskoe, v. Savtschenskoje.

Sawiauk, v. Pillistfer.

Savtschenskoje, v. Savtschenskoje.

Scheikahr Stattan, v. Buschhof.

Schellin, Stargard, Pomerania, Prussia.

Fell 1715, April 11, 4 p.m.

Synonym : Garz.

Stone. Veined intermediate chondrite.

After detonations, two stones fell, one of about 7 kg. and the other as large as a goose egg, but little has been preserved (L. W. Gilbert, *Ann. Phys.* (Gilbert), 1822, vol. 71, p. 213, and vol. 72, p. 328).

341 grams were in 1897 in the possession of the Bredow family in Wagenitz, Brandenburg.

Specimen : [33726], less than ½ gram.

Schie, v. Ski.

Schobergrund, v. Gnadenfrei.

Scholakov, v. Bachmut.

Schönen, v. Lundsgård.

Schönenberg, Pfaffenhausen, Swabia, Bavaria.

Fell 1846, Dec. 25, 2 p.m.

Stone. Veined white hypersthene-chondrite.

After detonations, a stone of about 8 kg. was seen to fall (L. Landbeck, *Jahres Ver. Vaterl. Naturk. Württemberg*, Stuttgart, 1847, vol. 2, p. 383, fig.). Described and analysed by C. W. Gümbel (*Sitzungsber. Akad. Wiss. München, Math.-phys. Kl.*, 1878, vol. 8, p. 40).

7½ kg. in Munich.

Specimen : [67208], 42 grams.

Schuscha, v. Indarch.

Schwetz, Kwidzyn, Poland.

Found 1850.

Synonym : Weichsel.

Iron. Medium octahedrite.

A mass of about 21½ kg. was found, 4 feet below the surface, in making a road (G. Rose, *Ann. Phys.* (Poggendorff), 1851, vol. 83, p. 594). Analysed by C. Rammelsberg (*Ann. Phys.* (Poggendorff), 1851, vol. 84, p. 153).

10 kg. in Berlin University, 843 grams in Vienna (Naturhist. Mus.).

Specimen : [33929], 1062 grams.

Schwiebus, v. Seeläsgen.

Scott City, Scott County, Kansas, U.S.A.

Found 1905.

Stone. Spherica¹ chondrite.

A stone of 135 grams was found in 1905, and another of about 2 kg. in 1911 (G. P. Merrill, *Proc. U.S. Nat. Mus.* Washington, 1912, vol. 42, p. 295; and *Amer. Journ. Sci.*, 1906, vol. 21, p. 360).

The 135 gram stone and 1725 grams of the other in Chicago (Field Mus. Nat. Hist.), 175 grams in Washington (U.S. Nat. Mus.).

Specimen : [1919,144], a slice, 130 grams.

Scottsville, Allen County, Kentucky, U.S.A.

Found 1867.

Synonym : Allen County.

Iron. Hexahedrite.

A mass of about 10 kg. was found (J. E. Whitfield, Amer. Journ. Sci., 1887, vol. 33, p. 500). Described by E. Cohen and analysed by R. Knauer (Meteoritenkunde, 1905, Heft 3, p. 218), Ni = 5.33% ($n = 17\frac{1}{2}$).

$1\frac{1}{2}$ kg. in Chicago (Field Mus. Nat. Hist.), $1\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.).

Specimen : [62871], a slice, 404 grams.

Searsmont, Waldo County, Maine, U.S.A.

Fell 1871, May 21, 8.15 a.m.

Synonyms : Searsport; Waldo County.

Stone. Spherical bronzite-chondrite.

After sound of explosion, a stone was seen to fall which on impact was broken into fragments weighing together about 12 lb.; only about 2 lb. appear to have been preserved (C. U. Shepard, Amer. Journ. Sci., 1871, vol. 2, p. 133). Analysed by J. L. Smith (*l.c.*, p. 200), $f = 14\frac{1}{2}$, $n = 10$, $m = 3\frac{1}{2}$.

Most of the 2 lb. in Amherst College.

Specimen : [44326], two fragments, $51\frac{1}{2}$ grams.

Searsport, v. Searsmont.

Seassport for Searsport, v. Searsmont.

Seeläsen, Schwiebus, Brandenburg, Prussia.

Known before 1847.

Synonyms : Brandenburg; Schwiebus.

Iron. Coarsest octahedrite.

A mass of about 102 kg. was found in draining a field, and several years afterwards (in 1847) was recognised as meteoric by — Hartig (— Göppert, Ann. Phys. (Poggendorff), 1848, vol. 73, p. 329; and W. G. Schneider, *ibid.*, 1848, vol. 74, p. 57). Analysed by A. Duflos (*ibid.*, vol. 74, p. 61) and by C. Rammelsberg (*ibid.*, vol. 74, p. 443), Ni = 6.23% ($n = 15$).

15 kg. in Tübingen University, $6\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.).

Specimens : [33927], 8118 grams; [23020], 1658 grams; [33197], $70\frac{1}{2}$ grams; [33928], 34 grams.

Segowlie, Bettiah, Champaran district, Bihar, India.

Fell 1853, March 6, noon.

Synonym : Soojoollee.

Stone. Crystalline chondrite.

About 30 stones, varying in weight from about $\frac{1}{2}$ lb. to 14 lb., were seen to fall (Journ. Asiatic Soc. Bengal, 1854, vol. 23, p. 746; and 1859, vol. 28, p. 261). Described by W. von Haidinger (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1860, vol. 41, p. 754, fig.).

$4\frac{1}{2}$ kg. in Calcutta (Mus. Geol. Surv. India), 996 grams in Vienna (Naturhist. Mus.).

Specimens : [34802], 639 grams; [34803], 539 grams; [34804], $27\frac{1}{2}$ grams.

***Selčany, Votice, Příbram, Bohemia.**

Found 1900.

Iron. Coarse octahedrite.

20 grams in Prague (Bohemian Mus.) (K. Vrba, Cat. Meteorites, Bohemian Museum, Prague, 1914, p. 10).

***Selma, Dallas County, Alabama, U.S.A.**

Found 1906.

Stone. Spherical chondrite.

A stone of 310 lb. was found, possibly fell 9 p.m., July 20, 1898, when a luminous meteor was seen: described by G. P. Merrill (Proc. U.S. Nat. Mus. Washington, 1907, vol. 32, p. 59, pls.) and by E. O. Hovey (Amer. Mus. Journ. New York, 1907, vol. 7, no. 1, p. 8, pls.). Analysed by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 21).

Main mass in New York (Amer. Mus. Nat. Hist.).

*Semipalatinsk, v. Pavlodar.***Sena, Sariñena, Huesca, Spain.**

Fell 1773, Nov. 17, midnight.

Synonym: Sigena.

Stone. Brecciated grey chondrite.

After detonations, a stone of about 4 kg. was seen to fall (L. Proust, Ann. Phys. (Gilbert), 1806, vol. 24, p. 261).

1½ kg. in Madrid (Mus. Cienc. Nat.), 89 grams in Paris (Mus. d'Hist. Nat.).

Specimen: [86641], less than a gram.

Seneca Falls, Cayuga County, New York, U.S.A.

Found 1850.

Synonym: Seneca River.

Iron. Medium octahedrite.

A mass of about 9 lb. was found in digging a ditch (O. Root, Amer. Journ. Sci., 1852, vol. 14, p. 439). Described and analysed by C. U. Shepard (*ibid.*, 1853, vol. 15, p. 363).

820 grams in Vienna (Naturhist. Mus.), 404 grams in Chicago (Field Mus. Nat. Hist.).

Specimen: [26845], 54 grams.

*Seneca River, v. Seneca Falls.**Senegal, v. Siratik.**Senhadja, v. Aumale.***Seres, Macedonia.**

Fell 1818, June.

Synonym: Macedonia.

Stone. Grey chondrite.

A stone of about 8½ kg. fell, but particulars are unknown (P. Partsch, Die Meteoriten, Wien, 1843, p. 75). Analysed by J. J. Berzelius (Ann. Phys. (Poggendorff), 1829, vol. 16, p. 611).

6½ kg. in Vienna (Naturhist. Mus.).

Specimen: [35165], 399¾ grams.

Serrania de Varas, Atacama, Chile.

Found 1875.

M

Synonym : Varas.

Iron. Fine octahedrite.

A mass of about $1\frac{1}{2}$ kg. was found about 1875 : described and analysed by L. Fletcher (Mineral. Mag., 1889, vol. 8, p. 258), $Ni = 8\%$ ($n = 11$).

Specimen : [53323], the main mass, 1468 grams, and pieces, 8 grams.

Setif, v. Tadjera.

Sevier County, v. Cosby's Creek.

***Sevilla, Adalusia, Spain.**

Fell 1862, Nov. 1.

Stone. "Howarditic" chondrite.

A stone of about 100 grams fell on "Nov. 1," not Oct. 1 as usually stated (O. Buchner, Ann. Phys. (Poggendorff), 1865, vol. 124, p. 591).

92 grams in Madrid (Mus. Cienc. Nat.).

Sevrukovo, Byelgorod, Kursk, Russia.

Fell 1874, May 11, 11.45 p.m.

Synonyms : Belgorod; Kursk; Sevrukof; Tula.

Stone. Black bronzite-chondrite.

After appearance of a band of light and detonations, a stone of 98 kg. fell 2 miles east of the village of Sevrukovo : described and analysed by A. Eberhard (Arch. Naturk. Liv-, Ehst- u. Kurlands, Ser. 1, Min. Wiss. Dorpat, 1882, vol. 9, p. 115), $f = 16\frac{1}{2}$, $n = 8$, $m = 4\frac{1}{2}$.

Main mass perhaps in Kharkov Museum, 365 grams in Paris (Mus. d'Hist. Nat.).

Specimen : [54631], 20 grams.

Sevrukof, v. Sevrukovo.

Shahpur, v. Futtehpur.

Shaital, v. Shytal.

Shalka, Bishnupur, Bankura district, Bengal, India.

Fell 1850, Nov. 30, 4.30 p.m.

Synonyms : Bancoorah (for Bankura); Bissempore; Sáluká.

Stone. Diogenite (hypersthene-achondrite).

After detonations, an immense stone, said to measure 3 feet across, fell and broke in pieces, and only about 8 lb. has been preserved (H. PIDGINGTON, Journ. Asiatic Soc. Bengal, 1851 (1852), vol. 20, p. 299; and W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1860, vol. 41, p. 251). Analysed by N. S. Maskelyne and W. Flight (Phil. Trans. Roy. Soc. London, 1871, vol. 161, p. 366), $m = 2$, and by H. B. von FOUILLON (Ann. Naturhist. Hofmus. Wien, 1888, vol. 3, p. 195), $m = 3$.
2½ kg. in Calcutta (Mus. Geol. Surv. India).

Specimens : [33761], two pieces, 866 grams and 175 grams, and fragments, 20 grams; [32098], 266 grams.

Shelburne, Grey County, Ontario, Canada.

Fell 1904, Aug. 13, 8 p.m.

Stone. Veined grey chondrite.

After appearance of fire-ball and detonations, two stones fell, weighing about 28 lb. and 13 lb. respectively : described and analysed by L. H. Borgström (Trans. Roy. Astron. Soc. Canada, 1904, p. 69, figs.), $f = 8$, $n = 10$, $m = 3$. Also described by O. C. Farrington (Field Columbian Mus. Chicago, 1906, Publ. 102, Geol. Ser., vol. 3, no. 2, p. 7, figs.).

7½ kg. in Chicago (Field Mus. Nat. Hist.).

Specimens : [1905,138], 1711 grams; [1905,435], 80½ grams.

Sherghotty, Gya, Bihar, India.

Fell 1865, Aug. 25, 9 a.m.

Synonyms : Behar (for Bihar); Umjhiawar.

Stone. Shergottite.

After detonations, a stone of about 11 lb. fell (W. C. Costley, Proc. Asiatic Soc. Bengal, 1865, p. 194; F. Fedden, Cat. Meteorites, Indian Museum, Calcutta, 1880, p. 27). Described and minerals analysed by G. Tschermak (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1872, vol. 65, Abt. 1, p. 122). Analysed also by E. Lumpe (Tschermaks Min. Mitt., 1871 (1872), p. 55), $m = \frac{3}{8}$.

4 kg. in Calcutta (Mus. Geol. Surv. India), 183 grams in Vienna (Naturhist. Mus.), 286 grams in Washington (U.S. Nat. Mus.).

Specimens : [41021], 62 grams; [41020], 55 grams.

Sherlock, v. Homestead.

Shingle Springs, El Dorado County, California, U.S.A.

Found 1869-70.

Synonyms : El Dorado County; Los Angeles.

Iron. Nickel-rich ataxite.

A mass of about 85 lb. was found in a field about ½ mile from Shingle Springs : described by B. Silliman with analysis by F. H. Cairn (Amer. Journ. Sci., 1873, vol. 6, p. 18), Ni = 17.17% ($n = 5$). Also described by E. Cohen with analysis by O. Sjöström (Meteoritenkunde, 1905, Heft 3, p. 156), Ni = 16.69% ($n = 5$). Occluded gases determined by A. W. Wright (Amer. Journ. Sci., 1876, vol. 11, p. 257).

According to H. A. Ward the main mass fell into the hands of boys and was lost : 932 grams in Yale University.

Specimen : [51634], 84 grams.

***Shirohagi, Etchu, Japan.**

Found 1890.

Iron. Octahedrite (?).

A mass of 22.7 kg. was found in the bed of the Kamiichikawa river (K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, p. 49). Analysed by Kodera (*l.c.*), Ni = 9.30% ($n = 10$).

Main mass in Tokyo (in possession of Viscount Enomoto).

Shrewsbury, York County, Pennsylvania, U.S.A.

Found 1907.

Iron. Medium octahedrite.

A mass of about 27 lb. was ploughed up : described by O. C. Farrington with analysis by Dickman and Mackenzie (Amer. Journ. Sci., 1910, vol. 29, p. 350, figs.), Ni = 8.80% ($n = 10$).

425 grams in Washington (U.S. Nat. Mus.).

Specimen : [1910,410], a slice, 938 grams.

Shropshire, v. Rowton.

Shupliyan, Kashmir, India.

Fell 1912, April.

Stone. Brecciated grey chondrite.

Two stones of about 4½ kg. and ½ kg. appear to have fallen, and were preserved in the Srinagar Museum (J. Coggin Brown, Rec. Geol. Surv. India, 1915, vol. 45, p. 221, figs.).

294 grams in Calcutta (Mus. Geol. Surv. India).

Specimen : [1915,143], 69 grams.

Shy^htal, Madhupur jungle, Mymensingh district, Bengal, India.

Fell 1863, Aug. 11, noon.

Synonyms : Dacca; Shaital; Shythal.

Stone. Brecciated intermediate hypersthene-chondrite.

After detonations, a stone of about 7 lb. was seen to fall (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1863, vol. 48, Abt. 2, p. 595, figs.). Analysed by T. Hein (*ibid.*, 1866, vol. 54, Abt. 2, p. 558). Amount and composition of nickel-iron determined by G. T. Prior (Mineral. Mag., 1919, vol. 18, p. 352-3), $f = 7\frac{1}{2}$, $n = 6\frac{1}{2}$.

2 $\frac{1}{2}$ kg. in Calcutta (Mus. Geol. Surv. India).

Specimen : [40583], two pieces, 436 and 13 grams.

Shythal, v. Shy^htal.

Sibley County, v. Arlington.

Sidowra, v. Supuhee.

Siena, Tuscany, Italy.

Fell 1794, June 16, 7 p.m.

Synonyms : Cosona; Lusignan d'Asso; San Giovanni d'Asso.

Stone. Intermediate chondrite (howarditic chondrite of Brezina).

After appearance of cloud and detonations, a shower of small stones fell, the largest weighing about 3 $\frac{1}{2}$ kg. (Domenico Tata, Ann. Phys. (Gilbert), 1800, vol. 6, p. 156; E. Howard, Phil. Trans. Roy. Soc. London, 1802, p. 173).

1 kg. in Siena (Accad. Fis.), 985 grams in Bologna University.

Specimens : [33990], a complete stone, 106 grams, and piece, 4 grams; [90245], 9 grams; [34589], 8 grams.

Sierra Blanca, Jimenez, Chihuahua, Mexico.

Found 1784.

Synonyms : Huejuquilla; Jimenez; Villa Nueva.

Iron. Coarse octahedrite.

Masses of "20, 30 and more hundredweights" were said to have been found (E. F. F. Chladni, Ann. Phys. (Gilbert), 1817, vol. 56, p. 383; and H. J. Burkart, Neues Jahrb. Min., 1856, p. 278), but only a few hundred grams are known in collections (see L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 149).

230 grams in Dorpat University, 147 grams in Berlin University.

Specimen : [35186], 15 grams.

Sierra de Chaco, v. Vaca Muerta.

Sierra de Deesa, v. Copiapo; Dehesa.

Sierra de las Adargas, v. Adargas.

Sierra de la Ternera, v. Ternera.

Sigena, v. Sena.

***Signal Mountain**, Lower California, Mexico.

Found several years before 1919.

Iron. Medium octahedrite.

A mass of 140 lb. was found and is supposed to have fallen a short time before, as detonations had been heard and a streak of "yellow-green

"smoke" had been seen one afternoon at about 3 p.m.: described by G. P. Merrill with analysis by J. E. Whitfield (Proc. U.S. Nat. Mus. Washington, 1922, vol. 61, p. 2, fig.), Ni = 7.86% ($n = 11\frac{1}{2}$).

Signet Iron, v. Tucson.

Sikkensaare, v. Tennasilmi.

Silver Crown, Laramie County, Wyoming, U.S.A.

Found 1887.

Synonyms: Crow Creek; Laramie County; Wyoming.

Iron. Coarse octahedrite.

A mass of 25.6 lb. was found half buried in decomposed granite (G. F. Kunz, Amer. Journ. Sci., 1888, vol. 36, p. 276). Analysed by H. L. McIlvain (G. F. Kunz, *l.c.*, p. 277), Ni = 8.31% ($n = 11$).

6.9 kg. in Vienna (Naturhist. Mus.).

Specimen: [67214], a slice, 583 grams.

Simbirsk (of G. von Blöde), v. Slobodka.

***Simbirsk** (of P. Partsch), Russia.

Known before 1838.

Synonym: Poltava (of G. von Blöde).

Stone. Crystalline chondrite.

A nearly complete stone of about $1\frac{1}{2}$ kg. was in Petrograd (Mus. Acad. Sci.) in 1846 under the name Poltava (G. von Blöde, Bull. Acad. Sci. St.-Petersbourg, 1848, vol. 6, p. 4; and P. Partsch, Die Meteoriten, Wien, 1843, p. 46).

***Simmern**, Hunsrück, Rhenish Prussia.

Fell 1920, July 1, 9.15 a.m.

Synonym: Hunsrück.

Stone. Chondrite.

After appearance of fire-ball and detonations, a large number of stones fell over an area of 10×2 miles, and three were found, one of 142 grams at Hochscheid, another of 610 grams at Götzerath, and the third of 470 grams between Hochscheid and Hintzerath (H. Michel, Fortschr. Min. Krist. Petr., 1922, vol. 7, p. 263, from K. König, Mitt. Ver. Freunde Astron. u. Kosm., 1920, vol. 30, p. 52, and 1921, vol. 31, p. 3; and K. Busz, *ibid.*, 1921, vol. 31, p. 35). Very little preserved.

Simondium, Lower Paarl, Cape Province, South Africa.

Found 1907.

Stone. Howardite (?).

Two masses each "a foot in diameter" were found, but only about $2\frac{1}{2}$ lb. have been preserved: described and analysed by G. T. Prior (Mineral. Mag., 1910, vol. 15, p. 312; 1918, vol. 18, p. 161; and 1921, vol. 19, p. 165), $n = 3$, m of olivine = 10, m of pyroxene = 2.

$\frac{1}{2}$ kg. in King William's Town Museum, South Africa.

Specimens: [1909, 148 and 149], six pieces, 828 grams; [1920, 143], two pieces, 198 grams.

***Simonod**, Ain, France.

Fell 1835, Nov. 13, 9 p.m.

Synonyms: Ain; Belmont.

Stone. Carbonaceous chondrite.

Original weight not known: history given by W. von Haidinger (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1867, vol. 55, p. 127). Possibly a pseudo-meteorite.

Sinal Peninsula, Egypt.

Fell 1916, July 14-17, 2.30 p.m.

Synonyms : Egyptian Meteorite; Kantarah.

Stone. Intermediate chondrite.

A stone of 1455 grams fell 8 miles east of Kantarah on the desert route to Katia, and another is said to have fallen on the opposite bank of the Suez Canal (H. Wilde, Mem. Manchester Lit. Phil. Soc., 1917, vol. 61, no. 4; and letters of T. A. Coward of Jan. 25, and Feb. 10, 1923, in Min. Dept., British Museum).

Main mass in Manchester University.

Specimen : [1923,1], 116 grams.

Sinaloa, v. Bacubirito.**Sindhri, Khipro taluq, Thar and Parkar district, Bombay, India.**

Fell 1901, June 10, 11 p.m.

Stone. Spherical chondrite.

After appearance of a brilliant fire-ball travelling from N.W. to E., and detonations, a stone of about 4 lb. which broke into two pieces was seen to fall near Samo Junejo village, and a week later another stone of about 14½ lb. was dug up (letter of Director, Geol. Surv. India, of Sept. 10, 1902, in Min. Dept., British Museum).

4 kg. in Calcutta (Mus. Geol. Surv. India), ½ kg. in Chicago (Field Mus. Nat. Hist.).

Specimen : [86146], the larger part of the stone which was seen to fall, 1199 grams; [86149], 48 grams.

***Singhur, Poona, Bombay, India.**

Found 1847.

Stony-iron. Pallasite (?).

A mass of 31½ lb. was found : sent to Bombay Geogr. Soc., and described and analysed by H. Giraud (Edinburgh New Phil. Journ., 1849, vol. 47, p. 56), Ni = 4.24% ($n = 17$). Also referred to by W. S. Clark (Amer. Journ. Sci., 1853, vol. 15, p. 8).

Siratik, Upper Senegal, West Africa.

Found 1716.

Synonyms : Bambuk; Senegal River.

Iron. Nickel-poor ataxite.

Large masses of iron were found by P. Compagnon in 1716 to be used by natives of Siratik and Bambuk for making pots (P. Compagnon, in J. J. Schwabe's Allgem. Hist. Reisen Wasser u. Lände, Leipzig, 1748, vol. 2, p. 510), but only about 1.7 kg. is known. Described by E. Cohen with analysis by O. Sjöström (Ann. Naturhist. Hofmus. Wien, 1809, vol. 13, p. 127), Ni = 5.21% ($n = 18$). The two larger pieces [90236-7] in the British Museum Collection formed part of the material brought back from Senegal by Gen. O'Hara and analysed by E. Howard (Phil. Trans. Roy. Soc. London, 1802, vol. 92, p. 211): a stony inclusion in the iron, suggestive of the meteorite being a siderolite, consists of fused sand and not olivine (G. T. Prior).

491 grams in Vienna (Naturhist. Mus.).

Specimens : [90236], 354 grams; [90237], 30½ grams; [90238], 10½ grams.

Sitathali, Raipur district, Central Provinces, India.

Fell 1875, March 4, 11 a.m.

Synonyms : Nurrāh; Raepur (for Raipur).

Stone. Grey bronzite-chondrite (howarditic chondrite of Brezina).

After detonations, two stones, of about 2 lb. and 1½ lb. respectively, fell ¾ mile apart, but the two fitted together (H. B. Modlicott, Proc. Asiatic Soc. Bengal, 1876, p. 115).

The main mass of the larger stone (935 grams) in Calcutta (Mus. Geol. Surv. India).

Specimen : [51186], the main mass of the smaller stone, 600 grams, and a piece, 53 grams.

Ski, Akershuus, Christiania, Norway.

Fell 1848, Dec. 27, evening.

Synonyms : Akershuus; Schie.

Stone. Veined white hypersthene-chondrite.

After detonations and appearance of light, two days later a stone of 850 grams was found on the ice of a small stream : described and analysed by H. S. Ditten (Ann. Phys. (Poggendorff), 1855, vol. 96, p. 343). Also described by H. Reusch (Neues Jahrb. Min., Beil.-Band, 1886, vol. 4, p. 493).

636 grams in Christiania University.

Specimen : [39712], two fragments, 4 grams.

Skookum Gulch, v. Klondike.

Slavetic, Zagreb (= Agram), Croatia, Yugoslavia.

Fell 1868, May 22, 10.30 a.m.

Stone. Brecciated grey chondrite.

After appearance of cloud, and detonations, several stones appear to have fallen, but only two, of 1583 grams and 125 grams respectively, were found (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1868, vol. 58, Abt. 2, pp. 162, 943, figs.).

1½ kg. in Vienna (Naturhist. Mus.).

Specimen : [43204], 20½ grams.

Slobodka, Yukhnov, Smolensk, Russia.

Fell 1818, Aug. 10.

Synonyms : Poltava (of P. Partsch); Simbirsk (of G. von Blöde).

Stone. Spherical chondrite.

A stone of about 2½ kg. fell (A. Göbel, Bull. Acad. Sci. St.-Petersbourg, 1867, vol. 11, p. 246).

792 grams in Tübingen University, 148 grams in Vienna (Naturhist. Mus.).

Specimens : [35182], 22 grams; [34673], 5 grams; [35178], less than a gram.

***Slobodka (of P. Partsch)**, Smolensk, Russia.

Known before 1838.

Stone. Veined white chondrite.

Mentioned by P. Partsch as having fallen on August 10, 1818 (Die Meteoriten, Wien, 1843, p. 55).

Main mass (792 grams) in Tübingen University (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 332). Another stone appears to have been mistaken for Slobodka (G. T. Prior).

Slonim, v. Ruschany.

Smith County, v. Carthage.

Smithland, Livingston County, Kentucky, U.S.A.

Found 1839-40.

Synonyms : Livingston County; Salem.

Iron. Nickel-rich ataxite.

A large mass was found and partly smelted, but about 5 kg. have been

preserved (G. Troost, Amer. Journ. Sci., 1846, vol. 2, p. 357). Described by E. Cohen and analysed by O. Sjöström (Meteoritenkunde, 1905, Heft 3, p. 101), Ni = 16.42% ($n = 5$).
1.9 kg. in Harvard University.

Specimen: [20645], the largest piece preserved, 2545 grams.

Smith's Mountain, Rockingham County, North Carolina, U.S.A.

Found about 1863.

Synonym: Rockingham.

Iron. Fine octahedrite.

A mass of about 11 lb. was found (W. C. Kerr, Rep. Geol. Surv. North Carolina, 1875, vol. 1, p. 313, and Appendix C, p. 56; and J. L. Smith, Amer. Journ. Sci., 1877, vol. 13, p. 213). Analysed by F. A. Genth (W. C. Kerr, *l.c.*, p. 313), Ni = 8.74% ($n = 10$), and by J. L. Smith (*l.c.*), Ni = 8.02% ($n = 11$).

Main mass in State Museum, Raleigh, North Carolina.

Specimens: [47241], 57½ grams; [47872], 19½ grams.

Smithsonian Iron, v. Coahuila.

Smithville, DeKalb County, Tennessee, U.S.A.

Found 1840.

Synonyms: Caney Fork; Cany Fork; Caryfort; DeKalb County.

Iron. Coarse octahedrite.

A mass of 36 lb. was found "near the mouth of the Cany Fork" in 1840 (G. Troost, Amer. Journ. Sci., 1840, vol. 38, p. 254, and 1845, vol. 49, p. 341); three other masses of about 7 lb., 15 lb., and 65 lb. at Smithville in 1892 (O. W. Huntington, Proc. Amer. Acad. Arts and Sci., 1894, vol. 21, p. 251, 1 pl.); and two masses of 8 lb. and 1 lb. at Berey Cantrell's in 1903 (L. C. Glenn, Amer. Journ. Sci., 1904, vol. 17, p. 216). Analysed by O. W. Huntington (*l.c.*), Ni = 7.02% ($n = 13$).

3¼ kg. in Chicago (Field Mus. Nat. Hist.), 3.3 kg. in Harvard University.

Specimens: [77093], Smithville, 1683 grams, and fragments 32 grams; [35791], "Caryfort," 4½ grams.

Smoky Hill River, v. Prairie Dog Creek.

Soko-Banja, Aleksinac, Serbia.

Fell 1877, Oct. 13, 2 p.m.

Synonyms: Alexinatz; Banja; Sarbanovac.

Stone. Spherical hypersthene-chondrite.

After appearance of fire-ball, and detonations, a shower of stones, of which about ten were found, fell over an area of 7×1 miles: the total weight was about 80 kg. and the largest stone weighed 38 kg. (C. Klein, Nachr. Gesell. Wiss. Göttingen, 1879, p. 92; E. Doll, Verh. Geol. Reichsanst. Wien, 1877, p. 283; S. M. Losanitch, Ber. Deutsch. Chem. Gesell. Berlin, 1878, vol. 11, p. 96). Analysed by S. M. Losanitch (*l.c.*); and by G. T. Prior (Mineral. Mag., 1916, vol. 18, p. 22), $f = 4$, $n = 3$, $m = 2½$.

26 kg. (3 stones of 16½, 9½, ½ kg.) in Belgrade Museum, 2½ kg. in Vienna (Naturhist. Mus.), 1.8 kg. in Paris (Mus. d'Hist. Nat.).

Specimen: [51857], 1965 grams.

***Sone**, Shūchi, Funai, Tamba, Japan.

Fell 1866, June 7, noon.

Stone. Crystalline chondrite.

After detonations, a stone of about 17 kg. was found (K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, p. 39).

Sonora, v. Tucson.

Soojoolie, v. Segowlie.

Sorakarta, v. Prambanan.

Sotoville, v. Tombigbee River.

South Arcot, v. Nammianthal.

South Bend, St. Joseph County, Indiana, U.S.A.

Found 1893.

Stony-iron. Pallasite.

A mass of 5½ lb. was ploughed up, two miles S.E. of South Bend: described by O. C. Farrington with analysis of the iron by H. W. Nichols (Field Columbian Mus. Chicago, 1906, Publ. 109, Geol. Ser., vol. 3, no. 2, p. 19; also on its density, *ibid.*, 1914, Publ. 178, vol. 5, no. 1, p. 14), Ni = 9.35% ($n = 10$).

Main mass in Chicago (Field Mus. Nat. Hist.).

Specimen: [1910,455], a slice, 181 grams.

South Canara, v. Udupi.

South Corston, v. Strathmore.

South-East Missouri, v. Saint Francois County.

Sowallick Mountain, v. Cape York.

Springbok River, v. Bethany.

Ssyromolotovo, Keshma, Yeniseisk, Siberia.

Found 1873.

Synonym: Angara.

Iron. Medium octahedrite.

A mass, stated to be of 196½ kg. (but over 216 kg. said to be in the Petrograd Collection), was found in sand on the left bank of the Angara (A. Göbel, Bull. Acad. Sci. St.-Petersbourg, 1874, vol. 19, p. 544, figs.). Analysed by — Pratz (A. Göbel, *l.c.*, p. 549), Ni = 7.10% ($n = 13$).

Main mass in Petrograd (Mus. Acad. Sci.) in 1897.

Specimen: [66748], a slice, 3½ grams.

Staartje, v. Uden.

Stade, v. Bremervörde.

Ställdalen, Nya Kopparberg, Örebro, Sweden.

Fell 1876, June 28; 11.30 p.m.

Stone. Brecciated grey bronzite-chondrite.

After appearance of fire-ball and detonations, 11 stones fell, of total weight of about 34 kg., the largest weighing about 12½ kg (A. E. Nordenskiöld, Geol. Fören. Förhand. Stockholm, 1878, vol. 4, p. 46). Analysed by G. Lindström (Öfvers. Vetensk.-Akad. Förhand. Stockholm, 1877, no. 4, p. 35), $f = 18$, $n = 11$, $m = 4½$.

23½ kg. in Stockholm (Riksmus.), 3½ kg. in Upsala University, 1 kg. in Paris (Mus. d'Hist. Nat.).

Specimens: [51549], 1575 grams; [1920,343], 63 grams.

Stannern, Iglau, Moravia, Czechoslovakia.

Fell 1808, May 22, 6 a.m.

Synonyms: Iglau; Langenpiernitz; Stonařov.

Stone. Eucrite.

After detonations, some 200–300 stones fell of which about 66 were recovered, of a total weight of about 52 kg., the largest weighing about 6 kg. (K. von Schreibers, Ann. Phys. (Gilbert), 1808, vol. 29, p. 225; P. Partsch, Die Meteoriten, Wien, 1843, p. 17; E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 340). Analysed by C. Rammelsberg

(Ann. Phys. (Poggendorff), 1851, vol. 83, p. 591), $m = \frac{1}{2}$; and by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1916, vol. 14, mem. 1, p. 22), $m = \frac{1}{2}$.

15½ kg. in Vienna (Naturhist. Mus.), 4 kg. in Tübingen University, 2 kg. in Budapest (Hung. Nat. Mus.), 1½ kg. in Berlin University.

Specimens: [21429], a complete stone, 673½ grams; [46970], 250 grams; [33892], 237 grams; [34374], two pieces, 214½ grams; [90255], a complete stone, 192½ grams; [1921, 18], a complete stone, 128 grams; [33741], 15 grams; [33731], Langenpiernitz, 13½ grams.

Stara Bela, v. Alt Bela.

Staunton, Augusta County, Virginia, U.S.A.

Found 1858-59.

Synonyms: Augusta County; Foldersville; Louisa County.

Iron. Medium octahedrite.

A mass of about 152 lb. was found in 1858 or 1859, was thrown away and later built into a wall, and in 1877 was taken out and recognised as meteoric (J. W. Mallet, Amer. Journ. Sci., 1878, vol. 15, p. 337): this mass was analysed by J. R. Santos (J. W. Mallet, *l.c.*, p. 338), Ni = 7.56% ($n = 12$). Three other masses, of about 25½, 16½, and 1½ kg. respectively, the first of which was ploughed up in 1869, were described and analysed by J. W. Mallet in 1871 (*ibid.*, 1871, vol. 2, p. 10, figs.), Ni = 10.24% ($n = 9$). A fifth mass of about 2 kg. was described by G. F. Kunz in 1887 and analysed by J. W. Mallet (*ibid.*, 1887, vol. 33, p. 58, fig.), Ni = 8.85% ($n = 10$). A sixth mass of about 7 kg. was described by H. D. Campbell and J. L. Howe with analysis by J. E. Whitfield (*ibid.*, 1903, vol. 15, p. 469, etch. fig.), Ni = 7.69% ($n = 12$). The first and sixth masses differ somewhat in structure from the others. Occluded gases determined by J. W. Mallet (Proc. Roy. Soc. London, 1871 (1872), vol. 20, p. 365).

6 kg. in Vienna (Naturhist. Mus.), 6½ kg. in Budapest (Hung. Nat. Mus.), 4½ kg. in Harvard University, 5.8 kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: [44761], 1583 grams; [54820], 1310 grams.

Stavropol, north side of the Caucasus, Russia.

Fell 1857, March 24, 5 p.m.

Stone. Crystalline bronzite-chondrite.

After detonations, a stone fell, measuring 132 × 93 × 66 mm. and weighing about 1½ kg.: described and analysed by H. Abich (Bull. Acad. Sci. St.-Petersbourg, 1860, vol. 2, pp. 404, 436), $f = 10$.

1½ kg. in Petrograd (Mus. Acad. Sci.) in 1897.

Specimens: [35216], 22½ grams; [35175], ¾ gram.

Stavropol, v. Stavropol.

Steinbach, Erzgebirge, Saxony.

Found 1724.

Synonyms: Breitenbach; Eibenstock; Grimma; Johannegeorgenstadt; Rittersgrün.

Stony-iron. Siderophyre.

Large masses of iron were said by G. Fabricius to have fallen at Whitsuntide, 1164, in the region of Meissen (E. F. F. Chladni, Ann. Phys. (Poggendorff), 1808, vol. 29, p. 379), and between 1540-1550 a large mass of iron is said by — Albin to have fallen near Grimma (E. F. F. Chladni, Feuer-Meteore, Wien, 1819, p. 212). A mass of nearly 1 kg. which has been known since about 1724 in the Naturalien-Cabinette at Gotha (F. Stromeyer, Göttingische Gelehrte Anzeig., 1824, vol. 3, p. 2082) may possibly be part of

the Grimma mass. A mass of "native iron" from Steinbach was described by J. G. Lehmann in 1751 (E. F. F. Chladni, *l.c.*, p. 324). In 1838 (or 1847) at Rittersgrün was found a mass of about 86½ kg. (A. Breithaupt, *Zeits. Deutsch. Geol. Gesell. Berlin*, 1861, vol. 13, p. 148) which was described by A. Weissbach (*Der Eisenmeteorit von Rittersgrün, Freiberg*, 1876) and analysed by C. Winkler (*Nova Acta Leop.-Carol.-Deutsch. Akad. Naturfor.*, 1878, vol. 40, no. 8, p. 333), $f = 51$, $n = 9$, $m = 5$. In 1861 another mass of about 10½ kg. was found at Breitenbach, and was described and analysed by N. S. Maskelyne and W. Flight (*Phil. Trans. Roy. Soc. London*, 1871, vol. 161, p. 359), $n = 9$, $m = 4$. Crystals of the pyroxene in Breitenbach have been described by V. von Lang (*Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl.*, 1869, vol. 59, Abt. 2, p. 848).

4½ kg. in Berlin University, 3 kg. in Vienna (*Naturhist. Mus.*).

Specimens : [35540], the main mass of Breitenbach, 6230 grams, and pieces 675 grams; [35606], Rittersgrün, 694 grams; [33956], Steinbach, 130½ grams; [34676], Steinbach, 1·7 grams.

Stewart County, v. Lumpkin.

Stockholm, v. Hessel.

Stonařov, v. Stannern.

Stonitz, v. Borodino.

Strathmore, Perthshire, Scotland.

Fell 1917, Dec. 3, 1.15 p.m.

Synonyms : Carsie; Corston; Easter Essendy; Essendy; Keithick; South Corston.

Stone. Intermediate hypersthene-chondrite.

After appearance of a brilliant fire-ball (travelling from S.E. to N.W.), and detonations, four stones fell, three in Perthshire at Easter Essendy (22½ lb.), Carsie (2 lb. 6 oz.), and Keithick (2½ lb.), and one in Forfarshire at South Corston (2 lb. 5 oz.) (H. Coates, *Trans. Perthshire Soc. Nat. Sci.*, 1920, vol. 7, p. 80, 11 pls.; also R. A. Sampson, *Proc. Roy. Soc. Edinburgh*, 1918, vol. 38, p. 70). Described and analysed by W. F. P. McIntock and F. R. Ennos (*Mineral. Mag.*, 1922, vol. 19, p. 323), $f = 8½$, $n = 6$, $m = 3½$.

The largest stone (Easter Essendy) in Edinburgh (Royal Scottish Museum); the Keithick stone in private possession; the South Corston stone in Perth Museum.

Specimen : [1922,793], the Carsie stone, 1056 grams.

Strkow, v. Tabor.

Stutsman County, v. Jamestown.

Sultanpur, v. Dyalpur.

Summit, Blount County, Alabama, U.S.A.

Known since 1890.

Synonym : Blount County.

Iron. Hexahedrite.

A mass of about 1 kg. was found : described by G. F. Kunz with analysis by F. P. Venable (*Amer. Journ. Sci.*, 1890, vol. 40, p. 322, fig.), Ni = 5·62% ($n = 16½$).

374 grams in Vienna (*Naturhist. Mus.*).

Specimen : [67452], 47½ grams.

Sumner County, v. Drake Creek.

Sumter County, v. Bishopville.

Supuhee, Padrauna, Gorakhpur district, United Provinces, India.

Fell 1865, Jan. 19, noon.

Synonyms: Bubuwoly; Goruckpur (for Gorakhpur); Mouza Khoorna; Sidowra.

Stone. Brecciated grey chondrite.

After detonations, six stones fell, one of about $\frac{1}{4}$ kg. at Sonkhunee, Supuhee, which appears to have been lost; two, of about $3\frac{1}{2}$ kg. and 3 kg. respectively, at Mouza Khoorna, near Padrauna (copy of Report of Maj. C. C. Drury, in Min. Dept., British Museum); and three small stones, one of 145 grams and two of about 70 grams each, at the Bubuwoly Indigo Factory (letter of Mary M. Brooko of Sept. 22, 1867, in Min. Dept., British Museum).

Specimens: of Mouza Khoorna—[39713], a nearly complete stone, 3595 grams; and [39714], about half of a stone, 445 $\frac{1}{2}$ grams, and fragments, 10 grams: of Bubuwoly—[41049], a complete stone, 145 grams; [41050], a nearly complete stone, 69 $\frac{1}{2}$ grams; and [41051], part of a small stone, 3 grams.

Surakarta, v. Prambanan.

Surprise Springs, Bagdad, San Bernardino County, California, U.S.A.
Found 1899.

Iron. Medium octahedrite.

A mass of about 1 $\frac{1}{2}$ kg. was found: described and analysed by E. Cohen (Mitt. Naturwiss. Ver. Neu-Vorpommern u. Rügen, Greifswald, 1901 (1902), vol. 33, p. 29), Ni = 7.65% ($n = 12$).

Main mass (1 kg.) in Chicago (Field Mus. Nat. Hist.).

Specimen: [85425], 97 $\frac{3}{4}$ grams.

Susquehanna, v. Bald Eagle.

Swajahn, v. Nerft.

Swalik for Sowellick, v. Cape York.

Swiecie, v. Schwetz.

Syromolotov, v. Ssyromolotovo.

Szadany, v. Zsádány.

Szlanicza, v. Magura.

Tabarz, Gotha, Thuringia, Germany.

Found 1854.

Synonym: Gotha.

Iron. Coarse octahedrite.

A mass of iron was said to have been seen to fall by a shepherd on Oct. 18, 1854, but its oxidized surface seemed to W. Eberhard who analysed the iron to be incompatible with a recent fall (Ann. Chem. Pharm., Leipzig and Heidelberg, 1855, vol. 96, p. 286), Ni = 5.69% ($n = 16$).

Very little known: 20 grams in Göttingen University, 16 grams in Vienna (Naturhist. Mus.).

Specimen: [35163], 9 grams.

Tabor, Bohemia.

Fell 1753, July 3, 8 p.m.

Synonyms: Krawin; Strków.

Stone. Brecciated spherical chondrite.

After appearance of light and detonations, a shower of stones, the largest weighing 13 lb., were seen to fall (E. F. F. Chladni, Feuer-Meteore, Wien, 1819, p. 246; and E. Howard, Phil. Trans. Roy. Soc. London, 1802, vol. 92, p. 179).

4 kg. in Vienna (Naturhist. Mus.), 762 grams in Budapest (Hung. Nat. Mus.), 640 grams in Prague (German University) in 1897.

Specimens: [90242], 151 grams; [1912,265], 18 grams; [1920,344], 7 grams; [90243], $4\frac{1}{2}$ grams.

Taborg
Taborskoie Selo } v. Ochansk.
Tabory

Tadjera, Sétif, Constantine, Algeria.

Fell 1867, June 9, 10.30 p.m.

Synonym: Setif.

Stone. Black chondrite (tadjerite of Brezina).

After appearance of fire-ball (travelling from S.E. to N.E.), and three detonations, two stones were found which according to weights in collections must have been of about 6 kg. and 3 kg. respectively (— Augeraud, Comptes Rendus Acad. Sci. Paris, 1867, vol. 65, p. 240; G. A. Daubrée, *ibid.*, 1868, vol. 66, p. 513). Described by G. A. Daubrée with analysis by S. Meunier (*l.c.*). S. Meunier has also examined the black matter of Tadjera (*ibid.*, 1871, vol. 72, p. 339; and Bull. Soc. franç. Min., 1889, vol. 12, p. 76).

$7\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat.), 166 grams in Vienna (Naturhist. Mus.).

Specimens: [71574], 36 grams; [43199], $3\frac{1}{2}$ grams.

Taiga, v. Toubil River.

Tajgha for Taiga, v. Toubil River.

Tajima, v. Takenouchi.

Tajka for Taiga, v. Toubil River.

Takano, v. Gifu.

Takenouchi, Yabu, Tajima, Japan.

Fell 1880, Feb. 18, 5.30 a.m.

Synonyms: Iwati; Tajima; Toke-uchi-mura.

Stone. Crystalline chondrite.

A stone of about $\frac{3}{4}$ kg. was seen to fall (K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, pp. 32, 40). Analysed by A. Lindner (Sitzungsber. Akad. Wiss. Berlin, 1904, p. 981).

Main mass in Tokyo (Imp. Mus.), 61 grams in Berlin University.

Specimen: [86642], $2\frac{1}{2}$ grams.

Talbot Road, v. De Cewsville.

Taltal, v. Vaca Muerta.

Tamarugal, Iquique, Tarapaca, Chile.

Found 1903.

Synonyms: El Inca; Pampa de Tamarugal.

Iron. Medium octahedrite.

A mass of 320 kg. was found in the Pampa de Tamarugal and was called "The Inca" by the finder: described by F. Rinne and H. E. Boeke and analysed by — Halbach (Neues Jahrb. Min., Festband, 1907, p. 227), Ni = 8.20% ($n = 11$).

830 grams in Chicago (Field Mus. Nat. Hist.), 550 grams in Paris (Mus. d'Hist. Nat.).

Specimens: [1907,1029], a slice, 6235 grams; [1921,5], a slice, 820 grams.

***Tamentit, Tuat, Morocco.**

Known 1864.

Synonym : Tuat.

Iron.

A mass, $\frac{1}{2}$ metre in diameter, was found lying on the Kasbah heights (G. Rohlfs, Petermann's Mitth., Gotha, 1865, p. 409). No specimens appear to have been preserved.

***Tané, Lake Biwa, Shiga, Ōmi, Japan.**

Fell 1918, Jan. 25, 2.28 p.m.

Stone. White chondrite.

After an explosion, a stone of 311 grams was found (K. Niinomi, Nature, London, 1918, vol. 101, p. 352).

*Taney County, v. Mincy.***Tanokami Mountain, Kurifuto, Ōmi, Japan.**

Found 1885.

Iron. Medium octahedrite.

A mass of 170½ kg. was found: described by Y. Otsuki with analysis by F. Kodera (Journ. Geol. Soc. Tokyo, 1900, vol. 7, p. 85, fig.; account in English by K. Jimbō, T. Wada's Beiträge Min. Japan, 1906, no. 2, pp. 32, 42), Ni = 8.56% ($n = 10\frac{1}{2}$).

Main mass in Tokyo (Imp. Mus.).

Specimen : [1905,69], a slice, 178 grams.

*Taos, v. Tucson.**Taranaki, v. Wairarapa.***Tarapaca, Chile.**

Known since 1894.

Iron. Medium octahedrite.

Little is known of this doubtful iron. It is mentioned by F. Berwerth as No. 189 in Verzeich. Meteoriten Naturhist. Hofmus. Wien (Ann. Naturhist. Hofmus. Wien, 1903, vol. 18, p. 19), but no weight of the specimen is given. Not identical with the pseudo-meteorite Tarapaca (Hemalga).

Specimen : [85843], obtained from A. Brezina, 14 grams.

*Tarn, v. Grazac.**Taromaru, v. Gifu.**Tarragona, v. Nulles.**Tasmania, v. Blue Tier.***Tazewell, Claiborne County, Tennessee, U.S.A.**

Found 1853.

Synonyms : Claiborne County; East Tennessee; Knoxville.

Iron. Finest octahedrite.

A mass of about 60 lb. was ploughed up 10 miles west of Tazewell (C. U. Shepard, Amer. Journ. Sci., 1854, vol. 17, p. 325). Described and analysed by J. L. Smith (*ibid.*, 1855, vol. 19, p. 153), Ni = 14.82% ($n = 6$). Occluded gases determined by A. W. Wright (*ibid.*, 1876, vol. 11, p. 257).

23 lb. in Amherst College, 4½ lb. in Washington (U.S. Nat. Mus.).

Specimen : [32047], 336 grams.

*Teheran, v. Veramin.**Teilleul, v. Le Teilleul.*

*Tejupilco, v. Toluca.***Temora**, County Bland, New South Wales.

Found 1880.

Iron. Coarsest octahedrite.

A mass, of which only a small fragment has been preserved, was found between Cootamundra and Temora, possibly near Narraburra Creek (G. W. Card, Rec. Geol. Surv. New South Wales, 1897, vol. 5, p. 52). In E. A. Wülfing's *Die Meteoriten in Sammlungen*, Tübingen, 1897, p. 252; A. Brezina's *Catalogue* (Ann. Naturhist. Hofmus. Wien, 1895, vol. 10, p. 288; and H. A. Ward's *Cat. Ward-Coonley Coll. Meteorites*, Chicago, 1904, p. 18, this iron and the finest octahedrite of Narraburra Creek have been confused.

Main mass in Sydney (Mining and Geol. Mus.).

Specimen: [1916,4], a slice, 6.6 grams.

*Temosachic, v. Huizopa.****Tennant's Iron.**

Found 1784.

Iron. Coarse octahedrite.

A specimen of 4 grams, from the Mineral collection of the Agric. Acad. of Petrovskoie-Rasumovskoie, near Moscow, and said to be from an old collection of Tennant of London, was in the Ward-Coonley Coll. in 1904 (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 25).

29 grams in Chicago (Field Mus. Nat. Hist.).

Tennasilm, Esthonia, Baltic States.

Fell 1872, June 28, noon.

Synonym: Sikkensaare.

Stone. Veined spherical hypersthene-chondrite.

After appearance of a cloud and detonations, some days later a stone of about 28½ kg. was found; it was broken in pieces by gipsies, but most of it was recovered: described and analysed by G. Schilling (Arch. Naturk. Liv-, Ehst- u. Kurlands, Ser. 1, Min. Wiss. Dorpat, 1882, vol. 9, Heft 2, p. 95, figs.), $f = 8$, $n = 5$, $m = 3$.

3½ kg. in Vienna (Naturhist. Mus.), 3½ kg. in Reval Museum, 3 kg. in Dorpat Museum.

Specimens: [1913,218], 177 grams; [54635], 15½ grams.

***Teocaltiche**, Jalisco, Mexico.

Found 1903.

Iron. Octahedrite.

A mass of 10 kg. was said by H. A. Ward to be in Mexico City (Mus. Inst. Geol.) (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, pp. 25 and 89).

*Teplá, v. Teplá.***Teplá**, Finsterhölzelries, Marienbad (=Marianské Lázně), Bohemia.

Found 1909.

Synonym: Finsterhölzelries.

Iron. Medium octahedrite.

A mass of 2½ kg., much oxidized, was found (K. Vrba, Věstník Českého Akad., Prague, 1910, vol. 19, p. 265; Abstract in Neues Jahrb. Min., 1911, Bd. 2, p. -202.).

Main mass in Prague (Bohemian Mus.).

Specimen: [1912,543], 58 grams.

Teposcolula, v. Yanhuitlan.

Terek, v. Grosnaja.

Tenera, Atacama, Chile.

Found before 1891.

Synonym : Sierra de la Tenera.

Iron. Nickel-rich ataxite.

A mass of 650 grams was found : described and analysed by G. F. Kunz and E. Weinschenk (Tscherma's Min. Petr. Mitt., 1891, vol. 12, p. 184, fig.), Ni = 16.22% ($n = 5$).

Main mass in Berlin University.

Specimen : [86640], $5\frac{1}{2}$ grams.

Terni, v. Collescipoli.

Těšice, v. Tieschitz.

Texas, v. Red River.

***Thomson**, McDuffie County, Georgia, U.S.A.

Found 1888.

Stone. Veined spherical chondrite.

A stone of 218 grams was found (G. P. Merrill, Smithsonian Misc. Coll., Washington, 1909, vol. 52, p. 473).

Complete stone in Washington (U.S. Nat. Mus.).

Thunda, Windorah, County Grey, Queensland.

Known since 1886.

Synonyms : Diamantina; Windorah.

Iron. Medium octahedrite.

A mass of 137 lb. was found (A. Liversidge, Journ. and Proc. Roy. Soc. New South Wales, 1886 (1887), vol. 20, p. 73, and 1888 (1889), vol. 22, p. 341). Described by E. Cohen with analysis by J. Fahrenhorst (Ann. Naturhist. Hofmus. Wien, 1900, vol. 15, p. 381), Ni = 8.49% ($n = 11$).

Main mass in possession of A. Liversidge, $1\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.), $1\frac{1}{2}$ kg. in Chicago (Field Mus. Nat. Hist.).

Specimens : [1922,159], a corner piece, 5190 grams; [66594], a slice, 396 grams.

Thurlow, Hastings County, Ontario, Canada.

Found 1888.

Iron. Fine octahedrite.

A mass of about $5\frac{1}{2}$ kg. was found (G. C. Hoffmann, Amer. Journ. Sci., 1897, vol. 4, p. 325). Described by E. Cohen with analysis by O. Bürger (Meteoritenkunde, 1905, Heft 3, p. 377), Ni = 9.92% ($n = 9$).

Main mass in Ottawa (Mus. Geol. Surv. Canada).

Specimen : [83395], a slice, 189 grams.

Tieschitz, Přerov, Moravia, Czechoslovakia.

Fell 1878, July 15, 1.45 p.m.

Stone. Spherical hypersthene-chondrite.

After detonations, a stone of about 28 kg. was seen to fall : described by A. Makovsky and G. Tschermak with analysis by J. Habermann (Denksch. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1879, vol. 39, Abt. 2, p. 187, figs.), $f = 8\frac{1}{2}$, $n = 5\frac{1}{2}$, $m = 2$.

Main mass in Vienna (Naturhist. Mus.).

Specimen : [54275], 17 grams.

Timochin, Yukhnov, Smolensk, Russia.

Fell 1807, March 25, 3 p.m.

Synonym : Juchnow (for Yukhnov).

Stone. Spherical chondrite.

After detonations, a stone of about 65½ kg. was seen to fall (L. W. Gilbert, Ann. Phys. (Gilbert), 1807, vol. 26, p. 238).

Main mass (48½ kg.) in Petrograd (Mus. Acad. Sci.) in 1897.

Specimens : [19969], 94½ grams; [373], two pieces, 54 grams; [35183], 36½ grams; [46010], 8 grams.

Timoschin, v. Timochin.

Tipperary, v. Dundrum; Mooresfort.

***Tiree**, Hebrides, Scotland.

Synonym : Hebrides.

Stone. Intermediate chondrite.

Two small pieces (3½ grams), labelled "Tyree, Scotland?" and with the date 1808? in the Catalogue of the W. Nevill collection to which they belong, are in the Museum of Practical Geology, London: they resemble Siena and are possibly identical (G. T. Prior).

Tirlemont, v. Tourinnes-la-Grosse.

Tirnova, v. Aleppo.

Tjabé, Padang, Rembang, Java.

Fell 1869, Sept. 19, 9 p.m.

Stone. Crystalline chondrite.

After appearance of fire-ball, moving from N.E., and a detonation, a stone of about 20 kg. was seen to fall and was found next day: described and analysed by E. H. von Baumhauer (Arch. Néerland. Sci. Nat. Haarlem, 1871, vol. 6, p. 305).

Main mass perhaps still in Java, ½ kg. in Budapest (Hung. Nat. Mus.).

Specimens : [56323], 96 grams; [55109], 24 grams; [48759], 14 grams.

***Tlacotepec**, Tecamachalco, Puebla, Mexico.

Found 1903.

Iron. Octahedrite (?).

A mass of 24 kg. was stated by H. A. Ward to be in Mexico City (Mus. Instit. Geol.) (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 25).

138 grams in Chicago (Field Mus. Nat. Hist.).

Tocavita, v. Santa Rosa.

Toluca, Mexico State, Mexico.

Known before 1776.

Synonyms : Abert Iron (?); Caparrosa; Ixtlahuaca; Mañi;

Ocatitlan; Poinsett Iron; Tejupilco; Xiquipilco; Ziquipilco.

Iron. Medium octahedrite.

Many masses, the largest of 300 lb., were found near Xiquipilco and were being forged into agricultural implements in 1776; three masses of 220 lb., 19½ lb., and 13 lb. respectively, were brought to Germany by G. A. Stein (F. Wöhler, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1856, vol. 20, p. 218; for full bibliography, see L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 164). Many analyses have been made (see O. Buchner, Die Meteoriten in Sammlungen, Leipzig, 1863, p. 141), and E. Cohen and E. Weinschenk determined the composition of various constituents (Ann. Naturhist. Hofmus. Wien, 1891, vol. 6, p. 135). The mass of 43 lb. (19½ kg.) found at *Los Reyes*, 40 miles east of Toluca, is considered by O. C. Farrington as distinct from Toluca (O. C. Farrington, Publ. Field Columbian Mus.

Chicago, 1902, Geol. Ser., vol. 1, p. 305). The Toluca iron is said to contain crystals of quartz and zircon (H. Laspeyres and E. Kaiser, Zeits. Kryst. Min., 1895, vol. 24, p. 485, and 1896-7, vol. 27, p. 586). To Toluca probably belongs the *Abert Iron*, a mass of about 456 grams found in the mineral collection of Col. J. J. Abert and presented by his son to the United States National Museum, Washington; it was described and analysed by R. B. Riggs (Bull. U.S. Geol. Surv., 1887, vol. 7, no. 42, p. 95, fig.), Ni = 7% ($n = 13$).

227 kg. in Chicago (Field Mus. Nat. Hist.), 120 kg. in Vienna (Naturhist. Mus.), 114 kg. in Hamburg.

Specimens: [40221], 74,160 grams ($163\frac{1}{2}$ lb.); [47192], 26,100 grams ($57\frac{1}{2}$ lb.); [35275], 9100 grams; [40733], 4550 grams; [33913], 1582 grams; [87081], 1236 grams; [33915], 1171 grams; [33916], 1107 grams; [33744], 940 grams; [33747], 7 pieces, 472 grams; [19964], 440 grams; [33914], $125\frac{1}{2}$ grams; [19965], 18 grams; [63057], a slice of Abert Iron, 47 grams.

***Tomakovka**, Ekaterinoslav, Ukraine.

Fell 1905, Jan. 17, 9.30 p.m.

Stone. Grey hypersthene-chondrite.

After appearance of luminous meteor (moving from west to east), several stones (none weighing more than $\frac{1}{2}$ kg.) fell at the village of Tomakovka: described by P. N. Chirvinsky, and analysed by B. P. Sherstyukov (Bull. Soc. franç. Min., 1921, vol. 44, p. 155).

Tomatlan, Jalisco, Mexico.

Fell 1879, Sept. 17, 4.30 p.m.

Synonyms: Bramudor; Fomatlan; Gargantillo; Jalisco; Tulisca.

Stone. Spherical chondrite.

After appearance of luminous meteor travelling from S.E. to N.W., and detonations, two or three stones fell, the largest of about 2 lb. (C. U. Shepard, Amer. Journ. Sci., 1885, vol. 30, p. 105; A. Castillo, Cat. Météorites Mexique, Paris, 1889, p. 13). Analysed by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1919, vol. 14, mem. 4, p. 3).

515 grams in Washington (U.S. Nat. Mus.).

Specimens: [63623], $102\frac{1}{2}$ grams; [63630], 33 grams.

Tombigbee River, Choctaw and Sumter County, Alabama, U.S.A.

Found 1859.

Synonyms: De Sotoville; Sotoville.

Iron. Nickel-poor ataxite.

Six masses, of a total weight of about 96 lb., the largest of 33 lb., were found at different times from 1859 to 1886 near De Sotoville: described by W. M. Foote with analysis by J. E. Whitfield (Amer. Journ. Sci., 1899, vol. 8, p. 153, fig. and map), Ni = 4.11% ($n = 23$). Analysed also by R. Knauer and E. Cohen, and by O. Hildebrand and E. Cohen with similar results (E. Cohen, Meteoritenkunde, 1905, Heft 3, p. 208).

2 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [84646], 7875 grams.

Tomhannock Creek, Rensselaer County, New York, U.S.A.

Found about 1863.

Synonyms: Ironhannock Creek; Rensselaer County; Yorktown.

Stone. Brecciated grey chondrite.

A stone of about 1½ kg. was found (S. C. H. Bailey, Amer. Journ. Sci., 1887, vol. 34, p. 60, fig.). A. Brezina points out the close similarity of Tomhannock Creek and Yorktown (of J. R. Gregory) with Homestead (Ann. Naturhist. Hofmus. Wien, 1896, vol. 10, p. 251).

1.3 kg. was in the Bailey Collection in 1897.

Specimens: [56157], Tomhannock Creek, 17 grams; [63886], Yorktown, 4 grams.

Tonganoxie, Leavenworth County, Kansas, U.S.A.

Found 1886.

Synonyms: Kansas; Leavenworth County.

Iron. Medium octahedrite.

A mass of about 26 lb. was found on a farm one mile west of Tonganoxie (F. H. Snow, Science, New York, 1891, vol. 17, p. 3). Described and analysed by E. H. S. Bailey (Amer. Journ. Sci., 1891, vol. 42, p. 385, figs.), Ni = 7.93% ($n = 11$).

Main mass in Kansas University.

Specimen: [83813], a slice, 260 grams.

***Tonk**, Rajputana, India.

Fell 1911, Jan. 22, 3.55 p.m.

Stone. Carbonaceous chondrite.

After appearance of a brilliant meteor (moving from west to east across the northern sky), and detonations, a shower of small stones fell, of which a total weight of only 7.7 grams was collected, the largest piece weighing 1.7 gram: described and analysed by W. A. K. Christie (Rec. Geol. Surv. India, 1914, vol. 44, p. 41).

6 grams in Calcutta (Mus. Geol. Surv. India).

Tonneler, v. Mauritius.

Torre Assisi, v. Assisi.

Touanne, v. Charsonville.

Toubil River, Achinsk, Yeniseisk, Siberia.

Found 1891.

Synonyms: Krasnojarsk Iron; Taiga; Tajgha; Tajka; Tubil.

Iron. Medium octahedrite.

A mass of about 22 kg. was found on the river Tubil, 264 miles ("400 versts") from Krasnoyarsk (A. Khlaponin, Verh. Russ. Min. Gesell., 1898, vol. 35, p. 233, figs.). It is identical with Taiga, to which place pieces were brought (A. Brezina, Ann. Naturhist. Hofmus. Wien, 1896, vol. 10, pp. 284, 307; and A. von Kupffer, *ibid.*, 1911, vol. 25, p. 436, fig.).

Main mass in Petrograd (Mus. Mining Inst.) in 1897.

Specimens: [83955], Toubil, 481 grams; [68216], "Tajgha," 9 grams.

Toulouse, Haute Garonne, France.

Fell 1812, April 10, 8 p.m.

Synonym: Grenade.

Stone. Veined intermediate chondrite.

After appearance of fire-ball, followed by three detonations, a small shower of stones fell between La Pradère in the N.W. and La Bordette in the S.E.: about eight stones were found, the largest weighing about 1 kg. (Ann. Phys. (Gilbert), 1812, vol. 41, p. 445, and vol. 42, pp. 111, 343).

208 grams in Paris (Mus. d'Hist. Nat.).

Specimens: [63927], 18 grams; [90260], 13½ grams.

***Tounkin, Tunka, Irkutsk, Siberia.**

Fell 1824, Feb. 18, 7 a.m.

Synonym : Irkutsk.

Stone. Grey chondrite.

After detonations, a stone of about 2 kg. was seen to fall (K. E. A. von Hoff, Ann. Phys. (Poggendorff), 1832, vol. 24, p. 224).

Only a splinter in Vienna (Naturhist. Mus.) known.

Tourinnes-la-Grosse, Tirelmont, Belgium.

Fell 1863, Dec. 7, 11.30 a.m.

Synonyms : Louvain; Tirlemont.

Stone. White hypersthene-chondrite.

After detonations, two stones fell; one of about 7 kg. was found in a wood near Opvelp, and the other of about $7\frac{1}{2}$ kg. was seen to fall at Le Culot sous Tourinnes-la-Grosse (P. A. Kesselmeier, Ann. Phys. (Poggendorff), 1864, vol. 122, p. 186; and Van Beneden, Bull. Acad. Roy. Belgique, 1863, vol. 16, p. 621). Analysed by F. Pisani (Comptes Rendus Acad. Sci. Paris, 1864, vol. 58, p. 169), $f = 8\frac{1}{2}$, $n = 5\frac{1}{2}$, $m = 3$.

1.3 kg. in Paris (Mus. d'Hist. Nat.), $\frac{1}{2}$ kg. in Berlin University, $\frac{1}{4}$ kg. in Vienna (Naturhist. Mus.).

Specimens : [54814], 143 grams; [36274], 60 grams.

*Toyah, v. Davis Mountains.****Travis County, Texas, U.S.A.**

Found 1889.

Synonym : Hill's stone.

Stone. Black chondrite.

A piece of $2\frac{1}{2}$ kg. was found : described and analysed by L. G. Eakins (Amer. Journ. Sci., 1890, vol. 39, p. 59).

Main mass in Washington (U.S. Nat. Mus.).

Trenton, Washington County, Wisconsin, U.S.A.

Found 1858.

Synonyms : Colorado (of A. Brezina); Milwaukee; Washington County; Wisconsin.

Iron. Medium octahedrite.

Masses of 60, 16, 10, and 8 lb. were found in 1858 (J. L. Smith, Amer. Journ. Sci., 1869, vol. 47, p. 271; F. Brennecke, Rep. Smithsonian Inst., Washington, for 1869, p. 417); and two more of $16\frac{1}{2}$ and 33 lb. in 1872 (J. A. Lapham, Amer. Journ. Sci., 1872, vol. 3, p. 69). Analysed by J. L. Smith (l.c., p. 271), $Ni = 7.20\%$ ($n = 12\frac{1}{2}$).

22 kg., including four complete stones of $12\frac{1}{2}$, $3\frac{1}{2}$, $3\frac{1}{2}$, 2 kg., in the Milwaukee Museum, 10 kg. in Wisconsin University, 6 kg. in Harvard University.

Specimens : [1921,22], 139 grams; [47242], 113 grams; [1920,345], 84 grams; [53293], 72 grams; [43051], 38 grams.

Trenzano, Brescia, Italy.

Fell 1856, Nov. 12, 4 p.m.

Stone. Veined spherical bronzite-chondrite.

After detonations, three stones were said to have fallen, but only two were found, the largest weighing about 9 kg. (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1860, vol. 41, p. 569). Described and analysed by G. Curioni (Atti R. Ist. Lombardo, 1860, vol. 1, p. 457).

$5\frac{1}{2}$ kg. in Bologna University, 2 kg. in Vienna (Naturhist. Mus.).

*Specimens: [65603], 93 grams; [65574], 55 grams; [35157], 9½ grams.

*Treysa, Hesse, Germany.

Fell 1916, April 3, 3.30 p.m.

Iron.

A mass of about 63 kg. fell, after appearance of fire-ball and detonations, and was found eleven months later from the observations of A. Wegener on the path of the meteor (A. Wegener, *Schr. Gesell. Beförd. Ges. Naturwiss. Marburg*, 1917, vol. 14, p. 1, 7 figs.; and F. Richarz, *ibid.*, 1918, vol. 14, p. 91, 3 pls., 1 text-fig. and map).

Trier, v. Bitburg.

Triguères, v. Château-Renard.

Trinity County, v. Canyon City; Glorieta.

Troy, v. Bethlehem.

Tuat, v. Tamentit.

Tubil, v. Toubil.

Tucson, Pima County, Arizona, U.S.A.

Known before 1850.

Synonyms: Ainsa Iron; Arizona; Bartlett Meteorite; Cañada de Hierro; Carleton Iron; Irwin-Ainsa Iron; Muchachos; Ring Meteorite; Santa Catarina Mt.; Santa Rita; Signet Iron; Sonora; Taos.

Iron. Ataxite.

Two large masses, one ring-shaped (the *Signet* or *Irwin-Ainsa Iron*) of 688 kg. and the other (the *Carleton Iron*) of 287 kg., known for centuries, had been transported to Tucson from the Puerta de los Muchachos, a pass 20–30 miles south of that town, and were used as anvils; first mentioned by J. F. Velasco in 1850 (*L. Fletcher, Mineral. Mag.*, 1890, vol. 9, p. 16 (full bibliography)). The Signet Iron in 1863 was deposited in the Smithsonian Institution at Washington (B. J. D. Irwin and S. Ainsa, *Rep. Smithsonian Inst. Washington*, 1863 (1864), pp. 55, 85); and the Carleton Iron in 1862 was sent by General J. H. Carleton to San Francisco (*Proc. Californian Acad. Nat. Sci., San Francisco*, 1863, vol. 3, pt. 1, p. 33). Analyses were made by J. L. Smith, F. A. Genth, and G. J. Brush (see *L. Fletcher, l.c.*). More recently both masses have been described by E. Cohen and analysed by J. Fahrenhorst (*E. Cohen, Meteoritenkunde*, 1905, Heft 3, p. 86); for Irwin-Ainsa, Ni = 9.24% ($n = 9$), and m of olivine (forsterite) = 51; for Carleton Iron, Ni = 8.89% ($n = 9\frac{1}{2}$), and m of olivine = 45; in both, the included forsterite amounted to about 3%.

The Ring Meteorite or Signet Iron in Washington (U.S. Nat. Mus.), the Carleton mass in San Francisco (California State Mining Bureau).

Specimens: of Carleton—[35195], 282 grams; of Irwin-Ainsa—[61922], 161 grams; [34604], 10 grams; [90229], 5 grams; [40880], 2 grams.

Tucuman, v. Otumpa.

Tula, v. Netschaëvo; Rakovka; Sevrukovo.

*Tule, Balleza, Chihuahua, Mexico.

Mentioned 1889.

Synonym: El Tule.

Iron. Medium octahedrite.

A small fragment was said by A. Castillo to be in the Engineering School of Mexico City (A. Castillo, *Cat. Météorites Mexique*, Paris, 1889, p. 7; *L. Fletcher, Mineral. Mag.*, 1890, vol. 9, pp. 123, 150).

Tulisca, v. Tomatlan.

Turakina, v. Wairarapa.

Turgai, v. Bischtübe.

Turner Mound, v. Anderson.

Turuma, v. Duruma.

Tuzla, Dobruja, Rumania.

Stone. Grey chondrite.

Doubtful: nothing known as to fall or find: specimen in the British Museum obtained from A. Kusché of Munich in 1920.

Specimen: [1921,4], 239 grams.

Tysnes Island, Hardanger Fiord, Norway.

Fell 1884, May 20, 8.30 p.m.

Synonym: Midt-Vaage.

Stone. Brecciated grey bronzite-chondrite.

After appearance of fire-ball and detonations, two stones fell of 18.95 kg. and 0.91 kg. respectively: described by H. Reusch (Neues Jahrb. Min., 1886, Beil.-Band 4, p. 473, figs.). Analysed by T. Hiortdahl (Nyt Mag. Naturvid., Christiania, 1886, vol. 30, p. 276), $f = 20$, $n = 11$, $m = 3$.

19 kg. in Christiania University.

Specimens: [62363], 895 grams; [1920,346], fragments, 1 gram.

Uberaba, Minas Geraes, Brazil.

Fell 1903, June 29, 10 a.m.

Synonym: Dores dos Campos Formosos.

Stone. Veined spherical chondrite.

After appearance of luminous meteor (travelling from N.E. to S.W.), and detonations, a stone of about 30–40 kg. was seen to fall about 50 miles west of Uberaba: described by E. Hussak (Ann. Naturhist. Hofmus. Wien, 1904, vol. 19, p. 85).

1½ kg. in São Paulo (Escola de Minas).

Specimen: [87109], 52½ grams.

Uden, North Brabant, Holland.

Fell 1840, June 12, 10.30 a.m.

Synonyms: Nord-Brabant; Staartje.

Stone. White hypersthene-chondrite.

After detonations, a stone of 0.71 kg. was seen to fall (R. Rees, Ann. Phys. (Poggendorff), 1843, vol. 59, p. 350). Analysed by E. H. von Baumhauer and F. Seelheim (Ann. Phys. (Poggendorff), 1862, vol. 116, p. 184).

Main mass (690 grams) in s'Hertogenbosch Museum.

Specimen: [35155], less than 1 gram.

Uderei, v. Angara.

Udipi, South Kanara district, Madras, India.

Fell 1866, April, 10 a.m.

Synonyms: Canara (for Kanara); South Canara.

Stone. Veined grey chondrite.

After detonations, a stone of about 8 lb. was seen to fall at Yedabettu village (13° 29' N., 74° 47' E.) in Udipi taluq (Proc. Madras Govt. Public Dept., April 5, 1866, p. 5, no. 57).

Specimen: [43057], the main mass of the stone, 3320 grams.

Umbala, Punjab, India.

Fell 1822-3.

Stone. Veined grey chondrite.

A stone of $3\frac{1}{2}$ oz. (100 grams) "fell about 40 miles west of Ambala between the Jumna and Punjab in 1822/3" (original label with specimen in Min. Dept., British Museum; see also W. S. Atkinson, Proc. Asiatic Soc. Bengal, 1859, vol. 28, p. 260, where, however, the date is given erroneously as 1832-3).

35 grams in Calcutta (Mus. Geol. Surv. India).

Specimen: [34801], $20\frac{1}{2}$ grams.*Umballa, v. Umbala.**Umehara, v. Gifu.**Umjhiawar, v. Sherghotty.***Union County, Georgia, U.S.A.**

Found 1853.

Iron. Coarsest octahedrite.

A mass of about 15 lb. was found (C. U. Shepard, Amer. Journ. Sci., 1854, vol. 17, p. 328).

 $2\frac{1}{2}$ lb. in Amherst College.

Specimen: [90226], a slice, 55 grams.

*Urba, v. Virba.**Urei, v. Novo-Urci.**Utah, v. Salt Lake City.****Ut6 Pass, Summit County, Colorado, U.S.A.**

Found 1894.

Synonym: Mount Ouray.

Iron. Coarsest octahedrite.

Mentioned by H. A. Ward (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 26). The specimen of 120 grams there referred to is now in Chicago (Field Mus. Nat. Hist.) (O. C. Farrington, Cat. Coll. Meteorites Field Mus. Nat. Hist. Chicago, 1916, p. 306).

Utrecht, Holland.

Fell 1843, June 2, 8 p.m.

Synonym: Blaauw-Kapel.

Stone. Veined spherical hypersthene-chondrite.

After detonations, a stone of 7 kg. was seen to fall near Blaauw-Kapel, 3 miles east of Utrecht, and three days later a second of 2.7 kg. was found at Loevenhoutje, 2 miles away (R. von Rees, Ann. Phys. (Poggendorff), 1843, vol. 59, p. 348; and E. H. von Baumhauer, *ibid.*, 1845, vol. 66, p. 465). Analysed by E. H. von Baumhauer (*l.c.*, p. 485), $f = 9$, $n = 7$, $m = 3$.

 $6\frac{1}{2}$ kg. in Budapest (Hung. Nat. Mus.), $2\frac{1}{2}$ kg. in Utrecht University.Specimens: [55108], $116\frac{1}{2}$ grams; [65493], $59\frac{1}{2}$ grams; [54643], $9\frac{3}{4}$ grams.**Uwet, Calabar, Southern Nigeria.**

Known before 1903.

Iron. Hexahedrite.

A mass of about 120 lb., said to have fallen about 80 years before 1907, was preserved by the natives; in 1908 a piece weighing about 20 lb. was sawn off and was presented through the Imperial Institute to the British Museum: described and analysed by G. T. Prior (Mineral. Mag., 1914, vol. 17, p. 127), $Ni = 5.78\%$ ($n = 16$).

Specimens: [1908,171], six pieces, 5597 grams; the largest end-piece weighing 2200 grams, and an etched slice 1352 grams.

Vaalbult, Prieska division, Cape Province, South Africa.

Found before 1921.

Iron. Coarse octahedrite.

A mass of about 26 lb. was found (letter of L. Peringuey of Feb. 11, 1921, in Min. Dept., British Museum): contains 6.99 % of Ni ($n=13$) (G. T. Prior).

Main mass in Cape Town (South African Mus.).

Specimen: [1921,274], 157 grams.

Vaca Muerta, Sierra de Chaco, Taltal, Atacama, Chile.

Recognised 1861.

Synonyms: Carrisalillo; Cerro la Bomba; Chile; Doña Inez; Janacera Pass; Jarquera; Llano del Inca; Mejillones; San Pedro; Sierra de Chaco; Taltal; Vegas i Carrisalillo.

Stony-iron. Mesosiderite.

Large masses up to 25 kg. in weight were found before 1864 (I. Domeyko, Anal. Univ. Chile, Santiago, 1864, vol. 25, p. 289; Comptes Rendus, Acad. Sci. Paris, 1864, vol. 58, p. 551, and 1875, vol. 81, p. 599). Later in 1888 precisely similar specimens were found on the *Llano del Inca* (small pieces weighing altogether 27 lb.), and at Cerro de *Doña Inez* (16 lb. weight of pieces), both about 100 miles S.E. of Taltal (E. E. Howell, Proc. Rochester Acad. Sci., 1890, vol. 1, p. 93). Locality discussed by L. Fletcher (Mineral. Mag., 1889, vol. 8, p. 234). Described and analysed by G. T. Prior (*ibid.*, 1918, vol. 18, p. 152), $n = 13$, m of olivine = 10, m of pyroxene = 2.

Of Vaca Muerta, 13 kg. in Paris (Mus. d'Hist. Nat.), 3 kg. in Vienna (Naturhist. Mus.): of Doña Inez, $1\frac{1}{2}$ kg. in Chicago (Field Mus. Nat. Hist.).

Specimens: of Vaca Muerta—[54721], 4370 grams; [46200], two pieces, 1850 grams and 551 grams, and fragments, 319 grams; [52234], 551 grams; [35124], 493 $\frac{1}{2}$ grams: of Doña Inez—[66203-4], two pieces, 46 and 965 grams: of Llano del Inca—[66205-66212], eight pieces, 370 grams.

Vago, Verona, Italy.

Fell 1668, June 21.

Synonym: Verona.

Stone. Spherical bronzite-chondrite.

After detonations and appearance of fire-ball, a shower of stones fell, of which two are said to have weighed about 136 kg. and 91 kg. respectively, but only a few grams have been preserved (E. F. F. Chladni, Ann. Phys. (Gilbert), 1803, vol. 15, p. 314, and 1815, vol. 50, p. 245; and Feuer-Meteor, Wien, 1819, p. 233). Of three small fragments referred to Vago in the Natural History Museum, Paris, in 1890, one was a cucrite, one (the largest, weighing 9 grams) an intermediate chondrite, and one a spherical chondrite (E. A. Wülfing, Die Meteoriten in Sammlungen, Tübingen, 1897, p. 375). Two pieces, of 26 and 7 grams respectively, in the Vienna collection in 1921, obtained by A. Brezina from the collection of Count Miniscalchi, are spherical chondrites; these probably, and not the intermediate chondrite of Paris (as first supposed by Brezina), came from the original Vago, for the piece of Vago originally in the Moscardo Museum in Verona passed into the possession of the Miniscalchi family (letter of June 23, 1922, of F. Koechlin, in Min. Dept., British Museum; and O. Buchner, Die Meteoriten in Sammlungen, Leipzig, 1863, p. 4).

Specimen: [1922,241], one of the two Vienna specimens, 7 grams.

Valdinizza, Pavia, Italy.

Fell 1903, July 12, 10 a.m.

Synonym: San Albano.

Stone. Intermediate chondrite.

• After appearance of a small cloud, and detonations, a stone of 131½ grams was seen to fall: described by R. Meli (Boll. Soc. Geol. Ital., 1906, vol. 25, Fasc. 3, p. 887).

Specimen: [1909,31], 2½ grams.

Valle de Allende, v. Adargas; Morito.

Valle de San Bartolomé, v. Adargas.

Varas, v. Serrania de Varas.

Vauchuse, v. Apt.

Vavilovka, Kherson, Ukraine.

Fell 1876, June 19, 2 p.m.

Synonyms: Cherson (for Kherson); Maksimovka.

Stone. Amphoterite (rodite).

After detonations, a stone of about 16 kg. fell about 2 miles from Vavilovka, and was broken up by the peasants: described and analysed by R. Prendel (Mém. Soc. Nation. Sci. Natur. Cherbourg, 1877-8, vol. 21, p. 203). Also analysed by P. G. Melikov (Ber. Deutsch. Chem. Gesell. Berlin, 1893, Jahrg. 26, Bd. 2, p. 1929), $f = 3$, $n = 2$, $m = 2\frac{1}{2}$.

1.4 kg. in Odessa University, 327 grams in Budapest (Hung. Nat. Mus.).

Specimens: [77498], 8½ grams; [54633], 1½ grams.

Vegas i Carrisalillo, v. Vaca Muerta.

Venagas, v. Descubridora.

Veramin, Karand, Tehrān, Persia.

Fell 1880, May, 3 hours before sunset.

Synonyms: Karand; Teheran.

Stony-iron. Mesosiderite.

After appearance of cloud and detonations, a mass of about 54 kg. was seen to fall "on the 8th of Jamadi-ul-aval A.H. 1298" (i. e. A.D. 1880) (H. A. Ward, Amer. Journ. Sci., 1901, vol. 12, p. 453; F. Dietzsch, Berg-u. Hüttenmann. Zeit., Leipzig, 1881, vol. 40, p. 100; ---Tholozan, Comptes Rendus Acad. Sci. Paris, 1884, vol. 98, p. 1465). Described by A. Brezina (Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1882, vol. 84, Abt. I, p. 277). Analysed by J. E. Whitfield (H. A. Ward, *l.c.*, p. 459), $f = 42$, $n = 13$.

Main mass in Tehrān, 844 grams in Chicago (Field Mus. Nat. Hist.).

Specimens: [54609], presented by the Shah of Persia in 1882,

55 grams; [84288], a slice from the piece obtained by H. A.

Ward in 1898, 181 grams.

Vereseghaza, v. Ohaba.

Verkhne Chirskaya, v. Verkhne Tschirskaja.

Verkhne Dnieprowsk, Ekaterinoslav, Ukraine.

Found 1876.

Synonyms: Ekaterinoslav; Werkhne Dnieprowsk.

Iron. Finest octahedrite.

Original weight and details of find not known: mentioned in 1882 in Catalogue of Y. I. Simashko's Meteorite Collection as found in 1876. Described by E. Cohen (Meteoritenkunde, 1905, Heft 3, p. 264). Perhaps identical with Augustinovka (A. von Kupffer, Ann. Naturhist. Hofmus. Wien, 1911, vol. 25, p. 438).

½ kg. in Riga Museum in 1911.

Specimen: [51183], 24½ grams.

***Verkhne Tschirskaja, Region of Don Cossacks, Russia,**

Fell 1843, Nov. 12, midday.

Synonym : Werkhne Tschirskaia.

Stone. Veined spherical chondrite.

After detonations, a stone of about 8 kg. was found (— Borissiak, Bull. Acad. Sci. St.-Petersbourg, 1847, vol. 5, p. 196).

Main mass perhaps in Kharkov University, 94 grams in Vienna (Naturhist. Mus.).

Verkhne Udinsk, Transbaikai, Siberia.

Found 1854.

Synonyms : Niro; Werkne Udinsk; Witim.

Iron. Medium octahedrite.

A mass of over 18 kg. was found on the river Niro, a tributary of the Vitim (G. Rose, Zeits. Deutsch. Geol. Gesell. Berlin, 1864, vol. 16, p. 355). Analysed by H. Laspeyres and E. Kaiser (Zeits. Kryst. Min., 1895, vol. 24, p. 493), Ni = 7.35% ($n = 12\frac{1}{2}$).

$1\frac{1}{2}$ kg. in Stockholm (Riksmus.).

Specimens : [54665], 2233 grams; [36012], 671 grams.

Vernon County, Wisconsin, U.S.A.

Fell 1865, March 26, 9 a.m.

Synonyms : Claywater Stone; Wisconsin.

Stone. Veined crystalline bronzite-chondrite.

After appearance of fire-ball and detonations, two stones of 800 and 700 grams fell, and were found five days later, the first, however, being subsequently lost : described and analysed by J. L. Smith (Amer. Journ. Sci., 1876, vol. 12, p. 207), $f = 17$, $n = 12$, m of pyroxene = $4\frac{1}{2}$.

200 grams in Harvard University.

Specimen : [50806], 52 grams.

Verona, v. Vago.

Viasma, v. Kikino.

Victoria, v. Cranbourne; Iron Creek.

Victoria West, Cape Province, South Africa.

Fell 1860.

Iron. Fine octahedrite.

A mass of $6\frac{1}{2}$ lb. was seen to fall by a Hottentot on a farm 30 miles S.W. of Victoria West (copy of letter of G. A. Maeder of Feb. 1, 1905, in Min. Dept., British Museum; J. R. Gregory, Geol. Mag., 1868, vol. 5, p. 532; J. L. Smith, Amer. Journ. Sci., 1873, vol. 5, p. 107). Described and analysed by J. L. Smith (*l.c.*), Ni = 10.14% ($n = 9$).

Half the mass in Cape Town (South African Mus.), $\frac{1}{4}$ kg. in Calcutta (Mus. Geol. Surv. India).

Specimens : [46007], 136 grams; [42513], $17\frac{1}{2}$ grams.

Vidin, v. Virba.

Vigarano, Ferrara, Italy.

Fell 1910, Jan. 22, 9.30 p.m.

Stone. Black spherical chondrite.

After detonations, a stone of about $11\frac{1}{2}$ kg. was seen to fall, and a month later a second stone of $4\frac{1}{2}$ kg. was found : described by A. Rosati (Atti R. Accad. Lincei, Roma, 1910, vol. 19, sem. 1, p. 841, fig.; and sem. 2, p. 25, fig.).

Specimens : [1911,174], 147 grams; [1920,347], 65 grams.

Vilabella, v. Nulles.

Vilanova de Sitjes, v. Canellas.

Villa Lujan, v. Lujan.

Villanova, v. Canellas; Motta di Conti.

Villa Nueva, v. Canellas; Sierra Blanca.

Villefranche, v. Salles.

Vilna, v. Zabrodje.

Virba, Vidin, Bulgaria.

Fell 1873, June 1.

Synonyms: Belgradjek; Urba; Vidin; Wirba.

Stone. Veined white chondrite.

After detonations, a stone of 3.6 kg. fell (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1874, vol. 79, p. 276). The stone stated by S. Meunier to have fallen "June 2, 1883," in a forest at "Virba, Belgrade Djik" (*ibid.*, 1893, vol. 117, p. 258), belongs here; a label with the British Museum specimen obtained from L. Eger in 1893 says that it fell in the year 1291 (Hedjir) [i. e. 1873] on Wednesday, May 20 (old style), i. e. June 1 (new style), in an oak-forest, $\frac{1}{4}$ hour from the Belgrade village of Virba.

Specimen: [70348], three fragments, 38 grams.

Visa, v. Mocs.

***Vishnupur, Bankura district, Bengal, India.**

Fell 1906, Dec. 15, 9.30 a.m.

Stone. Brecciated intermediate chondrite.

After detonations, two stones were seen to fall, one of 670 grams at Kheraibani village and the other of 1767 grams at Mathura village, $6\frac{1}{4}$ miles distant (G. de P. Cotter, *Rec. Geol. Surv. India*, 1912, vol. 42, p. 266, fig.).

The larger stone in Calcutta (Mus. Geol. Surv. India).

***Visuni, Umarnot taluq, Thar and Parkar district, Bombay, India.**

Stone. Crystalline spherical chondrite.

594 grams in Calcutta (Mus. Geol. Surv. India) (J. Coggin Brown, *Cat. Meteorites Coll. Geol. Surv. India, Calcutta*, 1916, p. 284).

Vivionnière, v. Le Teilleul.

Vorova, v. Angara.

Vouillé, Poitiers, Vienne, France.

Fell 1831, May 13, 11 p.m.

*Synonym: Poitiers.

Stone. Veined intermediate chondrite.

After appearance of fire-ball (moving from south to north), and detonations, a stone of about 20 kg. was found next day (G. A. Daubrée, *Comptes Rendus Acad. Sci. Paris*, 1864, vol. 58, p. 226; — Descrozières, *Bull. Soc. Agric., etc., Poitiers*, 1831, p. 226, with analysis).

Main mass (15.9 kg.) in Paris (Mus. d'Hist. Nat.).

Specimens: [35401], $54\frac{1}{2}$ grams; [1920,348], 30 grams; [33894], $6\frac{1}{2}$ grams.

Wacanda, Mitchell County, Kansas, U.S.A.

Found 1873.

Synonym: Mitchell County.

Stone. Brecciated spherical hypersthene-chondrite.

A stone of about 50 kg. was found and was broken in pieces, one of which weighed 58 lb. (26 kg.) (C. U. Shepard, *Amer. Journ. Sci.*, 1876, vol. 11, p. 473). Analysed by J. L. Smith (*ibid.*, 1877, vol. 13, p. 211), $f = 5$,

$n = 7$; and by J. E. Whitfield (G. P. Merrill, Mem. Nat. Acad. Sci. Washington, 1919, vol. 14, mem. 4, p. 13), $f = 5$, $n = 6$, $m = 3$.

The 58 lb. mass in Amherst College, 4 kg. in Vienna (Naturhist. Mus.), 4 kg. in Chicago (Field Mus. Nat. Hist.), $3\frac{1}{2}$ kg. in Harvard University.

Specimens: [53287], 352 grams; [50805], 11 grams.

Wadee Bancee Khaled, v. Nejed.

Wahhe, v. Pillistfer.

***Wairarapa Valley**, Wellington, New Zealand.

Found 1864.

Synonyms: Taranaki (?); Turakina (?); Wellington.

Stone. Crystalline chondrite.

A stone of 30 lb. was found at Tohirua (W. Flight, Chapter in the History of Meteorites, London, 1887, p. 140; G. R. Marriner, Trans. New Zealand Inst., 1909 (1910), vol. 42, p. 176).

Wairarapa is possibly one of the stones of the *Taranaki* meteorite which fell on Dec. 4, 1864, 2 a.m., partly in the sea and partly on land at *Turakina*, after loud detonations, and appearance of fire-ball of which the smoke persisted for two hours (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1865, vol. 52, Abt. 2, p. 151).

Main mass in Wellington (in possession of W. G. Mantell), 195 grams in Chicago (Field Mus. Nat. Hist.).

Waldau, v. L'Aigle.

Waldo County, v. Searsmont.

Waldron Ridge, Claiborne County, Tennessee, U.S.A.

Known 1887.

Synonym: Wallens Ridge.

Iron. Coarse octahedrite.

A mass found at Waldron (perhaps Wallens) Ridge appears to have been of about 30 lb., for a 15 lb. piece was described by G. F. Kunz (Amer. Journ. Sci., 1887, vol. 34, p. 475) and a 12 lb. one by A. R. Ledoux, who says that he handed over a larger piece to Kunz (Trans. New York Acad. Sci., 1889, vol. 8, p. 187). Analysed by A. R. Ledoux (*l.c.*), Ni = 6.01% ($n = 15$). This iron, together with Greenbrier County, was considered by O. W. Huntington as parts of the Cosby's Creek mass (Proc. Amer. Acad. Arts and Sci., 1894, vol. 29, p. 259).

3.8 kg. in Vienna (Naturhist. Mus.).

Specimens: [1922,160], a corner piece, 3260 grams; [67589], 70 grams.

Walker County, Alabama, U.S.A.

Found 1832.

Synonyms: Alabama; Claiborne; Lime Creek; Morgan County.

Iron. Hexahedrite.

A mass of about 165 lb. was found in the N.E. corner of Walker County (G. Troost, Amer. Journ. Sci., 1845, vol. 49, p. 344). Described by E. Cohen with analysis by O. Hildebrand (Meteoritenkunde, 1905, Heft 3, p. 166), Ni = 5.30% ($n = 18$).

40 kg. in Tübingen University.

Specimens: [16867], a large slab, 22 kg. ($48\frac{1}{2}$ lb.); [35413], 40 grams.

Walker Township, v. Grand Rapids.

Wallens Ridge, v. Waldron Ridge.

Wanee Bancee Khaled for *Wadee Bancee Khaled*, v. Nejed.

Warbe, v. Virba.

Warbreccan Run, Windorah, County Grey, Queensland.

Known before 1904.

Stone. Veined white hypersthene-chondrite.

Three stones of about 69, 64, and 1 lb. were known to the natives, in 1904, at a spot about 40 miles N.W. of Windorah, and had probably been seen to fall: described and analysed by G. T. Prior (Mineral. Mag., 1916, vol. 18, p. 6), $f = 7$, $n = 6$, $m = 3\frac{1}{2}$.

Specimens: the three nearly complete stones, [1905,377], 31,593 grams, and a piece, 25 grams; [1905,378], 29,140 grams; [1905,379], 443 grams.

Warialda, County Burnett, New South Wales.

Found 1919.

Iron. Nickel-poor ataxite (or hexahedrite).

A mass of 1 lb. was found (letter of G. W. Card of Dec. 1, 1920, in Min. Dept., British Museum). Probably identical with *Barraba* and *Bingera*.

Specimen: [1921,675], 36 grams.

Warrenton, Warren County, Missouri, U.S.A.

Fell 1877, Jan. 3, 7.15 a.m.

Stone. Spherical hypersthene-chondrite (ornansite of Brezina).

With a whistling noise a stone of about 100 lb. was seen to strike a tree and break into pieces: described and analysed by J. L. Smith (Amer. Journ. Sci., 1877, vol. 14, p. 222).

Only about 1.6 kg. known in collections; 571 grams in Harvard University, 260 grams in Yale University.

Specimen: [53290], 82 $\frac{1}{4}$ grams.

Warschau, v. Pultusk.

Washington County, v. Farmington; Trenton.

Wawilowka, v. Vavilovka.

Wayne County, v. Jenny's Creek; Wooster.

Weaver Mountains, Wickenburg, Maricopa County, Arizona, U.S.A.

Found 1898.

Iron. Nickel-rich ataxite.

According to H. A. Ward, the main part of a mass of about 85 $\frac{1}{2}$ lb., found in 1898, was in 1904 in the Museum of the State School of Mines, Tucson, Arizona (Cat. Ward-Coonley Coll. Meteorites, Chicago, 1904, p. 27). Analysed by A. Lindner (C. Klein, Sitzungsber. Akad. Wiss. Berlin, Math.-naturwiss. Kl., 1904, vol. 1, p. 982), Ni = 17.92% ($n = 4\frac{1}{2}$).

Specimen: [86946], a slice, 155 grams.

Weichsel, v. Schwetz.

Welland, Welland County, Ontario, Canada.

Found 1888.

Iron. Medium octahedrite.

A mass of about 18 lb. was ploughed up, about 1 $\frac{1}{2}$ miles north of Welland: described by E. E. Howell with analysis by J. M. Davison (Proc. Rochester Acad. Sci., 1890, vol. 1, p. 86). Kamacite, taenite, and plessite analysed by J. M. Davison (Amer. Journ. Sci., 1891, vol. 42, p. 64).

1 $\frac{1}{2}$ kg. in Vienna (Naturhist. Mus.), 1 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [65971], a slice, 466 grams.

Wellington, v. Rowton; Wairarapa.

Werchne Dnieprowsk, etc., v. Verkhne Dnieprovsk, etc.

Wessely, Hradisch, Moravia, Czechoslovakia.

Fell 1831, Sept. 9, 3.30 p.m.

Synonym : Znorow.

Stone. Veined grey chondrite.

After appearance of moving cloud, and detonations, a stone of about 3½ kg. was seen to fall (K. von Schreibers, Baumgartner's Zeits. Phys. Verw. Wiss. Wien, 1832, vol. 1, p. 193).

3½ kg. in Vienna (Naturhist. Mus.).

Specimens : [63878], 2½ grams; [35729], ½ gram.

Western Port district, v. Cranbourne.

West Liberty, v. Homestead.

Weston, Fairfield County, Connecticut, U.S.A.

Fell 1807, Dec. 14, 6.30 a.m.

Synonym : Fairfield County.

Stone. Brecciated spherical chondrite.

After appearance of fire-ball (travelling from north to south), and detonations, a shower of several stones fell over an area about 10 miles in length; the total weight was estimated at 330 lb. and the largest stone, which broke into fragments, at 200 lb. (B. Silliman and J. L. Kingsley, Trans. Amer. Phil. Soc. Philadelphia, 1809, vol. 6, p. 323; reprint in Amer. Journ. Sci., 1869, vol. 47, p. 1; also on path of meteor N. Bowditch, Mem. Amer. Acad. Arts and Sci., Cambridge (Mass.), 1809, vol. 3, p. 213). The smaller stones fell before the larger (O. C. Farrington, Publ. Field Columbian Mus. Chicago, 1907, Geol. Ser., vol. 3, p. 128).

Comparatively little has been preserved; 15½ kg. in Yale University.

Specimens : [35410], 886 grams; [90254], 116 grams; [90253],

32½ grams; [1920,349], 22 grams; [33742], 4½ grams.

White Sulphur Springs, v. Greenbrier County.

Whitfield County, v. Dalton.

Wichita County, Texas, U.S.A.

Known before 1836.

Synonyms : Austina; Brazos River; Red River; Young County.

Iron. Coarse octahedrite.

A mass of 320 lb., known to the Comanche Indians for many years, was removed in 1836 : described by B. F. Shumard (Trans. Acad. Sci. St. Louis, 1860, vol. 1, p. 622) and by J. W. Mallett (Amer. Journ. Sci., 1884, vol. 28, p. 285). Analysed by E. Cohen and E. Weinschenk (Ann. Naturhist. Hofmus. Wien, 1891, vol. 6, p. 153), Ni = 7.91% ($n = 11$).

Main mass in Texas University.

Specimens : [55825], 1377 grams; [34609], 20½ grams.

Widdin for Vidin, v. Virba.

Wigan, v. Appley Bridge.

Wild, v. Bethany.

Willamette, Clackamas County, Oregon, U.S.A.

Found 1902.

Iron. Medium octahedrite.

An immense cavernous mass of about 13½ tons was found 2 miles N.W. of Willamette : described by H. A. Ward (Proc. Rochester Acad. Sci., 1904, vol. 4, p. 137, many figs.), and by E. O. Hovey (Amer. Mus. Journ. New York, 1906, vol. 6, p. 105, figs.). Analysed by J. M. Davison, and by J. E. Whitfield (H. A. Ward, *l.c.*, p. 148), Ni = 8.30% ($n = 11$) (J. E. W.).

Main mass in New York (Amer. Mus. Nat. Hist.).

Specimen : [86945], a slice, 976 grams.

Williamsport, v. Bald Eagle.

Williamstown, Grant County, Kentucky, U.S.A.

Found 1892.

Iron. Medium octahedrite.

A mass of 68 lb. was found on a farm 3 miles north of Williamstown : described by E. E. Howell with analysis by W. Tassin (Amer. Journ. Sci., 1908, vol. 25, p. 49, fig.), Ni = 7.26% ($n = 13$).

Nearly 2 kg. in Chicago (Field Mus. Nat. Hist.), 1½ kg. in Washington (U.S. Nat. Mus.).

Specimen : [1908,183], a slice, 845 grams.

Wilson County, v. Cosby's Creek ; Cross Roads.

Winburg, Orange Free State, South Africa.

Fell 1881.

Synonym : Doornport.

Iron. Medium octahedrite.

A mass of about 50 kg. was said by natives to have been seen to fall : described and analysed by W. A. Douglas Rudge (Proc. Roy. Soc. London, 1914, ser. A, vol. 90, p. 19; and Trans. Roy. Soc. South Africa, 1912, vol. 2, pt. 3, p. 215), Ni = 6.91% ($n = 13$).

Main mass in Johannesburg Museum.

Specimen : [1915,146], 42 grams.

Windorah, v. Thunda.

Winnebago County, v. Forest City.

Wirba, v. Virba.

Wisconsin, v. Hammond ; Trenton ; Vernon County.

Witim, v. Verkhne Udinsk.

Witklip farm, Carolina district, Transvaal, South Africa.

Fell 1918, May 26, 9.40 a.m.

Stone. Grey chondrite.

After appearance of a luminous meteor with "cloudy trail," followed by detonations, a stone, of which only about four small fragments (weighing together about 22 grams) appear to have been preserved, fell on the farm Witklip (Union Observatory, Cape Town, Circular no. 44, Jan. 17, 1919).

Main mass in Cape Town (South African Mus.).

Specimen : [1921,275], 2.5 grams.

Wittekrantz, Beaufort West, Cape Province, South Africa.

Fell 1880, Dec. 9, 8 a.m.

Stone. White hypersthene-chondrite.

After appearance of moving cloud, and detonations, two stones were seen to fall, the larger of which weighed about 4½ lb. : of the smaller only a broken fragment, weighing about 113 grams, was preserved : described and analysed by G. T. Prior (Mineral. Mag., 1913, vol. 17, pp. 28, 132), $f = 8$, $n = 7$, $m = 3\frac{1}{2}$.

Main mass of larger stone in Cape Town (South African Mus.).

Specimen : [1914,1032], a piece of the smaller stone, 69.6 grams.

Wittmess, v. Eichstädt.

Wjasemsk, v. Kikino.

Wöhler's Iron, v. Otumpa (?).

Wold Cottage, Thwing, Scarborough, Yorkshire, England.

Fell 1795, Dec. 13, 3.30 p.m.

Synonym : Yorkshire.

Stone. Veined white chondrite.

After detonations heard in adjacent villages, a stone of about 56 lb. was seen to fall (E. Howard, Phil. Trans. Roy. Soc. London, 1802, p. 174; Ann. Phys. (Gilbert), 1803, vol. 15, p. 318).

Specimens: [1073], the main mass of the stone, 20,638 grams (45½ lb.), and two fragments, 44 grams and 1 gram.

Wooster, Wayne County, Ohio, U.S.A.

Recognised 1858.

Synonym: Wayne County.

Iron. Medium octahedrite.

A mass of about 50 lb. was found in a wood: described and analysed by J. L. Smith (Amer. Journ. Sci., 1864, vol. 38, p. 385). The main mass appears to have been lost; only a few grams known in collections.

Specimens: [34584], 3 grams; [34585], 2 grams.

Worowo for *Vorova*, v. *Angara*.

Wyoming, v. *Silver Crown*.

Xiquipilco, v. *Toluca*.

Yamanomura, v. *Kyushu*.

Yanhuitlan, Oaxaca, Mexico.

Known before 1825.

Synonyms: Cholula; Goldbach's Iron; Misteca in part; Oaxaca; Teposcolula.

Iron. Fine octahedrite.

A mass of about 421 kg. was found by Indians at the foot of the hill Deque-Yacunino and was used as an anvil; in 1825 it was seen by A. F. Morney who analysed a fragment (El Mosaico Mexicano, 1840, vol. 3, p. 219, quoted by L. Fletcher, Mineral. Mag., 1890, vol. 9, p. 171). In 1864 the mass was removed to the National Museum in the city of Mexico, and was described by A. Castillo and R. de la Loza (Bol. Soc. Mexicana Geogr. y Estad., Mexico, 1865, vol. 10, p. 661). Described by E. Cohen with analysis by O. Bürger (Meteoritenkunde, 1905, Heft 3, p. 316), Ni = 7.36% ($n = 12\frac{1}{2}$).

Main mass in Mexico City (National Museum), 17 kg. in Chicago (Field Mus. Nat. Hist.).

Specimen: [1919,142], a slice, 305 grams.

***Yardea**, Gawler Range, South Australia.

Found 1875.

Synonym: Gawler Range.

Iron. Medium octahedrite.

A mass of 7½ lb. was found, 4 miles south of Yardea Station (C. Anderson, Rec. Australian Mus. Sydney, 1913, vol. 10, p. 66).

Main mass in South Australian Museum, Adelaide.

Yarra Yarra River, v. *Cranbourne*.

Yatoor, Nellore, Madras, India.

Fell 1852, Jan. 23, 4.30 p.m.

Synonyms: Nellore; Yatur.

Stone. Spherical chondrite.

After a single detonation, a stone of about 30 lb. was seen to fall (W. von Haidinger, Sitzungsber. Akad. Wiss. Wien, Math.-naturwiss. Kl., 1861, vol. 44, Abt. 2, p. 73; and N. S. Maskelyne and V. von Lang, Phil. Mag., 1863, vol. 25, p. 443).

- Specimen : [34793], the main mass of the stone, 10,400 grams, and pieces of 129, 111, and 69 grams.

Yatur, *v.* Yatoor.

• **Yenberrie**, Northern Territory, Australia.

Found 1918.

Iron. Coarse octahedrite.

A mass of 291 lb. was found about 20 miles S.S.E. of Yenberrie : described and analysed by J. C. H. Mingaye (*Journ. Washington Acad. Sci.*, 1920, vol. 10, p. 314), Ni = 5.98% ($n = 15\frac{1}{2}$).

A mass of 28 lb. was divided between the Museums of Chicago, New York, and Washington.

Yenshiyahara, *v.* Kyushu.

Yodzé, *v.* Jodzie.

Yonatsu, *v.* Yonōzu.

Yonōzu, Nishikambara, Echigo, Japan.

Fell 1837, July 14, 4 p.m.

Synonyms : *Echigo*; *Eschigo*; *Yonatsu*.

Stone. Crystalline chondrite.

After detonations, a stone of about 30½ kg. fell : described by K. Jimbō (*T. Wada's Beiträge Min. Japan*, 1906, no. 2, p. 36).

Main mass in Tokyo (Imp. Mus.).

Specimen : [1905,70], 34½ grams.

• **York County**, Nebraska, U.S.A.

Found 1878.

Iron. Medium octahedrite.

A mass of 835 grams was ploughed up (E. H. Barbour, *Rep. Geol. Surv. Nebraska, Lincoln*, 1903, p. 184, fig.). Analysed by G. F. Kunz (*l.c.*, p. 182), Ni = 7.38% ($n = 12$).

Main mass in the Kunz Collection in New York (*Amer. Mus. Nat. Hist.*).

Yorkshire, *v.* Middlesbrough; *Wold Cottage*.

Yorktown, *v.* Tomhannock Creek.

• **Youanmi district**, Western Australia.

Iron. Medium octahedrite.

A mass of 268 lb. was found (E. S. Simpson, *Ann. Prog. Rep. Geol. Surv. Western Australia for 1917, 1918*, p. 19).

Main mass in Perth, Western Australia (Mus. Geol. Surv.).

Youndegin, Avon, South West Division, Western Australia.

Found 1884.

Synonym : *Penkarring Rock*.

Iron. Coarse octahedrite.

In 1884 four pieces of 25½, 24, 17½, and 6 lb. were found ½ mile N.W. of Penkarring Rock and 70 miles east of York : described and analysed by L. Fletcher (*Mineral Mag.*, 1887, vol. 7, p. 121; 1899, vol. 12, p. 171; and 1908, vol. 15, p. 147), Ni = 6.46% ($n = 14$), contains cliftonite and tanite Fe_2Ni_3 . In 1891 another mass of 382½ lb., and in 1892 a still larger mass of 2044 lb. were found (*Nature, London*, 1892-3, vol. 47, pp. 90 and 469). An analysis of Youndegin by A. Bowley is given in *Bull. Geol. Surv. Western Australia*, 1916, p. 136, Ni = 7.01% ($n = 13$).

Main part of the 24 and 17 lb. masses in Melbourne (Nat. Mus.), of the 382 lb. mass in Chicago (*Field Mus. Nat. Hist.*), and of the 2044 lb. mass in Vienna (*Naturhist. Mus.*).

Specimens : [56150], the main mass of the largest of the four masses first found, 9820 grams, and fragments, 317 grams; [62964],

the smallest of the four masses first found, 2700 grams; [71528], from the 382 lb. mass, 630 grams; [1920,350], an etched slice, 73 grams; [86998], from the 382 lb. mass, 37 grams.

Young County, v. Wichita County.

Zaborzika, Jitomir, Volhynia, Ukraine.

Fell 1818, April 11.

Synonyms: Czartorya; Saboryzy.

Stone. Veined intermediate chondrite.

A stone of about 4 kg. fell, but no details are known (A. Laugier, *Ann. Phys. (Gilbert)*, 1823, vol. 75, p. 264; E. von Eichwald, A. Erman's *Arch. Wiss. Kunde Russland*, Berlin, 1846, vol. 5, p. 178).

2.8 kg. in Kiev University in 1897.

Specimens: [33183], 3 fragments, 8 grams; [56469], 8 grams; [54641], $\frac{1}{2}$ gram.

Zabrodje, Vilna, Lithuania.

Fell 1893, Sept. 22, 2 hours before sunset.

Synonym: Vilna.

Stone. Veined intermediate hypersthene-chondrite.

After appearance of a cloud moving from N.E. to S.W., and detonations, a stone of about 3 kg. fell through the roof of a house (R. Prendel, *Mém. Soc. Nat. Nouvelle Russie*, Odessa, 1894, vol. 19, pt. 1, p. 243, fig.). Described and analysed by P.G. Melikov and L.V. Pissarjevsky (Pisarszhevsky) (*Ber. Deutsch. Chem. Gesell.* Berlin, 1894, Jahrg. 27, Bd. 2, p. 1235), $f = 9$, $n = 6$, $m = \frac{2}{3}$ 3.

300 grams in Odessa University.

Specimen: [77497], 3 grams.

Zacatecas, Mexico.

Known before 1792.

Iron. Brecciated octahedrite.

A large mass of about 1000 kg. (1 ton), from time immemorial before 1792, had been in a street of Zacatecas, and was said to have been found near the Quebradilla mine on the western outskirts of the city (L. Fletcher, *Mineral. Mag.*, 1890, vol. 9, p. 162, quoting from the *Gazetas de Mexico* for April 3, 1792; H. J. Burkart, *Neues Jahrb. Min.*, 1856, p. 288). Analysed by H. Müller (*Quart. Journ. Chem. Soc. London*, 1860, vol. 11, p. 236), Ni = 5.82% ($n = 16$), and by — Scherer (E. Cohen, *Ann. Naturhist. Hofmus. Wien*, 1897, vol. 12, p. 47), Ni = 5.98% ($n = 15$).

Main mass in Mexico City (School of Mines), 5 kg. in Tübingen University, 3 kg. in Bonn University, $2\frac{1}{2}$ kg. in Paris (Mus. d'Hist. Nat.), 2 kg. in Vienna (Naturhist. Mus.).

Specimens: [28296], 2580 grams; [14201], 1065 grams; [33917], 100 grams; [33199], 91 grams.

Zavid, Zvornik, Bosnia, Yugoslavia.

Fell 1897, Aug. 1, 11.30 a.m.

Stone. Brecciated grey hypersthene-chondrite.

After appearance of fire-ball (moving from S.E. to N.W.), and detonations, four stones fell, of about 90 kg., $2\frac{1}{2}$ kg., 220 grams, and 8 grams respectively: described by F. Berwerth (*Wiss. Mitt. Bosnien u. Hercegovina*, 1901, vol. 8, p. 409). Analysed by C. Hödlmoser (*Tschermaks Min. Petr. Mitt.*, Wien, 1899, vol. 18, p. 513), $m = 2$.

Main masses in Sarajevo (Bosnian Landesmus.).

Specimens: [83666], 265 grams; [1920,351], 78 grams.

Zebrak, Hořovice (= Horowitz), Beraun, Bohemia.

Fell 1824, Oct. 14, 8 a.m.

Synonyms: Beraun; Horowitz; Praskoles.

Stone. Spherical chondrite.

After detonations, a stone of about 2 kg. fell at Praskolesy (Ann. Chim. Phys., Paris, 1825, vol. 30, p. 421; and Ann. Phys. (Poggendorff), 1826, vol. 6, p. 28).

870 grams in Prague (Bohman Mus.), 450 grams in Vienna (Naturhist. Mus.).

Specimens: [76153], 76 grams; [1920,352], 11 grams; [33736], 7 grams.

Zipaquirá, v. Rasgata (under Santa Rosa).**Ziquipilco**, v. Toluca.***Zmenj**, Minsk, Russia.

Fell 1858, August.

Synonym: Minsk.

Stone. Howardite.

A stone of 246 grams fell: described by A. Brezina (Ann. Naturhist. Hofmus. Wien, 1896, vol. 10, p. 240). Analysed by P. G. Melikov (Journ. Russ. Phys. Chem. Gesell., 1896, vol. 28, pp. 114, 299; Abst. in Neues Jahrb. Min., 1899, Bd. 2, p. 3).

116 grams in Vienna (Naturhist. Mus.).

Znorow, v. Wessely.**Zomba**, Nyasaland, British Central Africa.

Fell 1899, Jan. 25, 7.45 a.m.

Synonym: Mount Zomba.

Stone. White hypersthene-chondrite.

After appearance of luminous meteor and detonations, several stones fell on the slopes of Mt. Zomba over an area of 9×3 miles; ten stones were found, the largest weighing 5 lb. $12\frac{1}{2}$ oz. (2.6 kg.), and the total weight was about $7\frac{1}{2}$ kg.: described and analysed by L. Fletcher (Mineral. Mag., 1901, vol. 13, p. 1, map), $f = 8\frac{1}{2}$, $n = 7$, $m = 3\frac{1}{2}$.

Specimens: [84357], about half of a stone, 825 grams, and fragments, 3 grams; [84356], a complete stone, 483 $\frac{1}{2}$ grams; [84355], a complete stone, 412 grams; [1908,48], a complete stone, 297 grams; [84358], three pieces, 270, 44, and 22 grams, and fragments, 24 grams.

Zsadány, Temes district, Rumania.

Fell 1875, March 31, 3-4 p.m.

Synonym: Szadany.

Stone. Spherical chondrite.

After detonations, a shower of stones fell, of which 9 small ones only were found, of total weight 552 grams and the largest of 152 grams (W. Pillitz, Zeits. Anal. Chem. (Fresenius), Wiesbaden, 1879, vol. 18, p. 61). Described by E. Cohen (Verh. Naturhist.-Med. Ver. Heidelberg, 1880, vol. 2, p. 154).

223 grams in Budapest (Hung. Nat. Mus.) in 1897.

Specimens: [52274], a complete stone, 13 $\frac{1}{2}$ grams; [48751], 11 $\frac{1}{2}$ grams.

Zululand, v. N'Kandhla.**Zweibrücken**, v. Krähenberg.

LIST OF THE CASTS OF METEORITES IN THE BRITISH MUSEUM COLLECTION

Accalana.	*Futtehpur (Bithur).	*Obernkirchen.
*Akbarpur.		*Ogi.
Algoma.	Gilgoin.	Otumpa.
Antarctic.	Goalpara.	
Appley Bridge.	Gopalpur.	*Parnallee.
Assisi.	Gross-Divina.	Petersburg.
		Pillistfer.
*Babb's Mill.	*Homestead.	Pulsora.
Baroti.		
*Barranca Blanca.	Ibbenbühen.	*Rancho de la Pila.
Barratta.		Roebourne.
Beuste.	*Jelica.	*Rowton.
Bingera.	*Jhung.	
Blithfield.		St. Denis-Westrem
Boogaldi.	*Kaeë.	St. Mark's.
Braunau.	Kareë Kloof.	Sarepta.
Buschhof.	*Kheragurh.	*Segowlie.
*Bustee.	Kilbourn.	Shytal.
*Butsura.	Kingston.	Sindhri.
	Kulnine.	Sitathali.
Cabin Creek.		Ski.
Cachiyuyal.	Launton.	*Steinbach
Cadell.	Leeuwfontein.	(Breitenbach).
Caperr.	Lick Creek.	Steinbach
Carraweena.	Linum.	(Rittersgrün).
Castalia.		*Supuhee.
Chandakapur.	Mazapil.	
*Charlotte.	Menow.	*Udipi.
Chulaфинnee.	*Mhow.	
Cranbourne (Arltunga)	*Middlesbrough.	Vaalbult.
*Cronstad.	Moorefort.	Virba.
*Crumlin.	Mount Ayliff.	
	Mount Edith.	
*Daniel's Kuil.	Mungindi.	*Warbreccan.
Dolgovoli.	Murnpeowie.	Wariaida.
Donga Kohrod.		*Wittekrantz.
Dundrum.		*Wold Cottage.
*Durala.	*Nedagolla.	
	*Nejed.	Yardea.
	Nerft.	*Yatoor.
*Eli Elwah.	N'Khandla.	Yenberrie.

The Trustees possess moulds of those meteorites in the preceding list of which the names are marked with an asterisk, and casts may be obtained on payment of the necessary expenses.

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